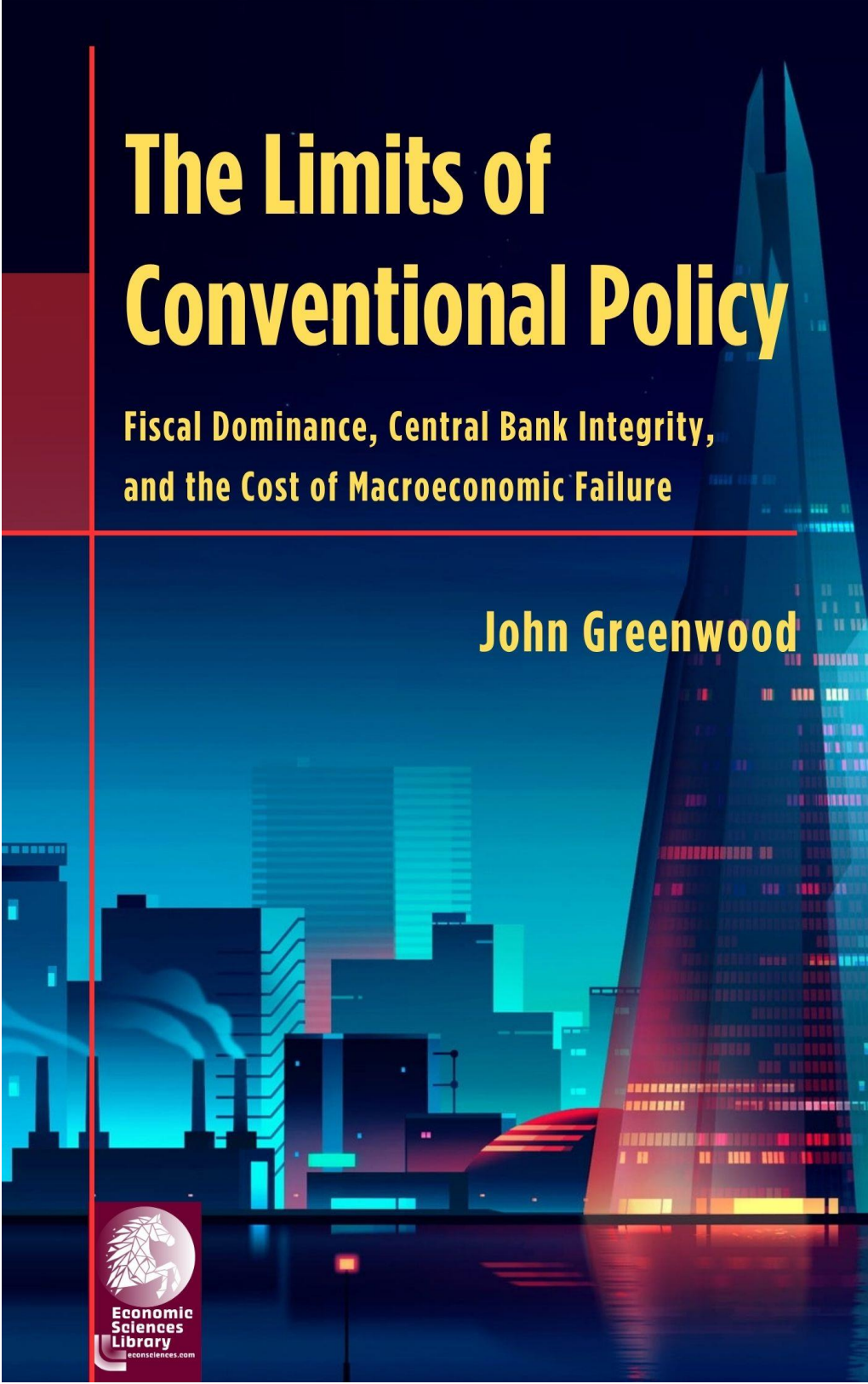
The Limits of Conventional Policy

Fiscal Dominance, Central Bank Integrity, and the Cost of Macroeconomic Failure

John Greenwood



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Edinburgh University, UK

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Author: ***John Greenwood***
Edinburgh University, UK

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Preface

This book focuses on the most critical challenge in modern macroeconomic management: the helplessness of conventional monetary and exchange rate policies against deeply rooted fiscal imbalances and institutional crises of credibility. In an era where financial crises, instability, and persistent inflation continue to plague the global economy, this collection uses four distinct case studies to examine the traps policy makers frequently fall into and the radical institutional reforms required to escape them. The core thesis of the book is that the power of policy tools is only as strong as the independence of the institutions that implement them and their relationship with fiscal discipline.

The last fifteen years ushered in an era where Central Banks (CBs) employed historically unconventional tools. Following the 2008-09 Global Financial Crisis, Quantitative Easing (QE) became the primary instrument in an environment where traditional interest rate policy proved inadequate. However, our first paper demonstrates that these tools are not homogenous and that their implementation dramatically alters the outcomes. QE operations implemented by the Federal Reserve (Fed) and the Bank of England (BoE) were consistent with an expansion of deposits in the banking system and a reduction of non-bank private sector leverage, promoting a gradual normalization of growth, interest rates, and inflation.

In contrast, the operations of the Bank of Japan (BoJ) and the European Central Bank (ECB) failed to yield the same results. This proves that it is not just the magnitude of QE, but how it affects the credit transmission mechanism, that is critical. For monetary expansion to succeed, it must not only inject money into the system but also improve the risk and leverage structure of the private sector. The failures in Japan and the Eurozone indicate that expansion was insufficient to overcome structural impediments, and these policies alone could not deliver the promise of generating demand or normalizing inflation.

The dilemmas of monetary and exchange rate policies are not limited to the post-crisis era; they are historical patterns. Our second paper draws a striking comparison between China today and Japan in the 1920s, illustrating how the obsession with an overvalued exchange rate and external surplus destabilizes an economy. Similar to Japan's experience after WWI, when large external surpluses drove up domestic prices to uncompetitive levels, China's fixed-rate policy and huge external surplus accumulation following the 1994 exchange rate reunification led to non-competitive domestic pricing. In 1920s Japan, this resulted in a decade of financial crises, slow growth, agricultural depression, and deflation, only resolved by a radical devaluation in 1931. This paper showcases the cost of turning exchange rate policy into a political fetish, emphasizing that the refusal of flexibility—despite short-term gains—ultimately sets the stage for long-term economic collapse.

The third and fourth papers of the book focus on Argentina, the most striking and long-lasting example of fiscal indiscipline and central bank abuse. The Argentine case demonstrates how the cycle of successive governments funding budget deficits by relying on the central bank's monetary powers chronically erodes the value of the currency. This cycle has led to persistently rapid broad money growth, high inflation, and a chronically weak peso.

The third paper proposes a radical solution to end this chronic instability loop: the abolition of the BCRA (Central Bank of Argentina) and the Dollarization of the economy. This proposal acknowledges that the root of the problem is not merely economic, but institutional and political. In Argentina,

monetary instability has become an established feature of the system, not a deviation. Therefore, it argues that stability can only be achieved by entirely removing monetary policy from the purview of the government and local institutions—i.e., through Dollarization. The paper includes critical technical details for the required practical steps on Dollarization-Day, such as replacing the LELIQs with US$-denominated government securities, managed by a new independent office for Argentine government debt.

The fourth paper analyzes Argentina's struggle with conventional remedies, namely IMF Surveillance. Despite the election of a market-friendly administration (Mauricio Macri), the core problem—the central bank's abuse for fiscal deficit financing—persisted. The IMF's $50 billion Stand-By Agreement (SBA) proposed a gradual reduction of the fiscal deficit and the strengthening of central bank autonomy. However, this paper argues that the IMF plan's assumption of a "painless and recession-free" gradual recovery was unrealistic, deeming the current fiscal and inflation targets unattainable. Consequently, the IMF plan was predicted to fail, leading Argentina either to default on its foreign-denominated debt once more or face financial collapse and high unemployment, virtually ensuring a return to populism for another decade. This paper underscores the failure of gradualism in an environment where institutional trust has been decimated.

These four papers collectively demonstrate that regardless of geography or time, the fundamental pillars of macroeconomic stability remain constant: sound fiscal policy, a credible institutional framework, and properly designed transmission mechanisms for policy tools. This compilation serves as a call for academics, policymakers, and financial experts to look beyond the policy toolkit and to fundamentally question institutional structures. We hope this book will be a vital resource in the search for bolder, more structural, and less conventional solutions to current challenges.

J. Greenwood
USA

1 Why negative rates are not a solution for Japan or the Eurozone

1. Introduction

The BoJ has now been conducting QE for just over three years, while the ECB has been conducting QE for just over one year. In neither case can the results be said to be satisfactory. Section 1 of this article explains why these two central banks have achieved far less success than either the Fed or the BoE, and Section 2 reviews the balance sheet data that offers evidence of their failed QE policies. Section 3 spells out why the QE strategies pursued by the BoJ and the ECB have led directly to negative interest rates, and why in turn negative rates are not a solution to the problems of the Japanese and Eurozone economies. Section 4 concludes.

2. Two types of QE policy

Among the major developed economies (US, UK, the Eurozone and Japan) two different types of QE have been conducted in recent years, targeting securities held by different holders (see Figure 1).

Two types of QE operation		
Central Bank	Targeted Securities	Main Sellers
Federal Reserve	1. Mainly long-dated USTs; some T-Bills 2. Mortgage Backed Securities	Non-Banks
Bank of England	1. Long-dated Gilts 2. Commercial paper	Non-Banks
Bank of Japan	1. JGBs, Finance Bills 2. ETFs, J-REITs	Banks Non-Banks
ECB and Euro-area National Central Banks	1. Sovereign Debt 2. Corporate Bonds (from June 2016)	Banks Non-Banks

Figure 1. *Two Types of QE Implemented, Targeting Different Holders*

The QE operations conducted by the Fed and the BoE have largely been successful (1) because they were targeted at the purchase of securities from non-banks, (2) they therefore increased the stock of money or purchasing power held by firms and households directly by injecting new deposits into the banking system, and (3) because these new deposits were not accompanied by the creation of new loans, they were consistent with a reduction in private sector leverage.

By contrast, the QE operations conducted by the BOJ and the ECB have had much less success (1) because they were targeted largely at the purchase of securities from banks, and as a result, (2) they did not increase the stock of money or purchasing power held by firms and households, and (3) were not consistent with any reduction in private sector leverage.

To restore economic growth and raise inflation closer to the target area of 2% in both Japan and the Euro-area, policy-makers need to achieve two sets of results. First they need to encourage and ensure the repair of private sector balance sheets since spending will not resume normal or potential growth rates unless excess leverage is eliminated. Second, the economies need to be re-liquefied, or provided with additional purchasing power, but without adding to leverage.

In my assessment, there are two rules for central banks to follow when designing a QE programme.

First, the central bank should only buy securities from **non-banks**. The reason is that the primary purpose of doing QE is – or should be -- to expand the money supply. If the central bank buys securities from banks, there can be no assurance that the money supply will increase. However, if it buys securities from **non-banks**, this guarantees that new deposits will be created, expanding the money supply. Of course, if firms or households are de-leveraging or repaying debt, the central bank may need to conduct even larger scale asset purchases to counter any reduction of deposits due to the repayment of debt.

Second, the central bank should buy only long term securities. This is only partly to bring down yields at the longer end of the curve – thereby flattening the yield curve. Nevertheless, many commentators, including officials at the BOJ and ECB, believe – mistakenly, in my view - that the primary purpose of QE is to lower long term rates. See for example p. 2 of the BoJ's Assessment, May 2015). More importantly it means the central bank's portfolio is not eroded by selling or running down its holdings. As a result the volume of funds injected into the economy can remain stable for a long period of time.

The Bank of Japan has repeatedly broken both these rules; the ECB has mostly violated the first rule. By contrast, when the Bank of England announced its QE programme in February 2009 it said explicitly that the Bank would buy gilts with longer maturities (10-15 years) precisely so that these purchases would be from non-banks (as UK banks typically do not hold long-dated gilts due to the capital risk). In doing so it guaranteed the success of its programme. "The aim of the policy was to inject money into the economy in order to boost nominal spending and thus help achieve the 2% inflation target." (BOE Quarterly Bulletin, 2011 Q3). The Federal Reserve, for its part, mostly bought long-dated securities (US Treasuries and Mortgage Backed Securities), but there was a period during QE2 when the Fed acquired shorter dated Treasuries which then started to mature. To prevent the Fed's balance sheet from shrinking and to maintain the effectiveness of QE, the FOMC decided to

replace its shorter term securities with longer dated securities in 2011-12 (before the start of QE3). The operation was officially named the Maturity Extension Program, but more popularly known as "Operation Twist" after the famous episode in the 1961 when the Fed had attempted to twist the yield curve by changing the maturity composition of its portfolio. Under QE3 the Fed purchased exclusively long-dated securities.

To explain the difference between the Bank of England (or Fed) operations on the one hand and the BOJ (or ECB) operations on the other it is helpful to review the impact of their QE transactions or asset purchases on the balance sheets of the banks and the non-bank public.

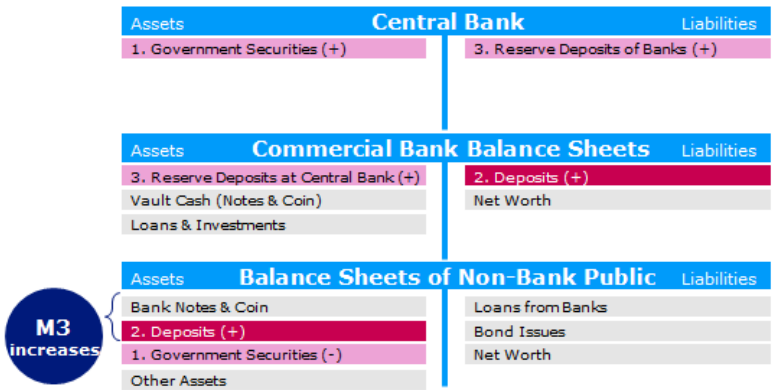


Figure 2. *A Well-Designed Asset Purchase Plan – Liquidity Enhancing*

The numbers in Figure 2 relate to the paired transactions set out in the T-form balance sheets above.

1. The central bank purchases government securities from **non-bank** entities. Non-bank entities (e.g. insurance companies, pension funds, individuals, or foreigners) sell government securities to the central bank.

2. The sellers receive new deposits from the central bank in settlement of their sale. The sellers deposit their newly acquired funds in commercial bank deposit accounts.

3. The banks deposit the payment drafts they receive from the sellers of government securities with the central bank.

Banks' holdings of deposits (reserves) at the central bank are increased by an amount which exactly matches the central bank's initial purchase.

Note that after these transactions both sides of the central and commercial banks' balance sheets have expanded, with increases in assets matched by increases in liabilities, and, crucially, the broad money supply (e.g. M2, M3 or M4) held by the non-bank public has expanded. Although the balance sheets of the non-bank public have not increased, they have become more liquid as government securities have been replaced with new deposits. The key point about this series of transactions is that the money in the hands of the non-bank public has now increased, and, given that interest rates are likely at the zero bound, the holders will almost certainly wish to spend the proceeds either on new investments such as corporate bonds, equities, real estate or commodities, bidding up their prices. Such purchases will kick-start the portfolio re-balancing process.

Note also that the money supply has increased without any addition to bank loans. The counterpart asset corresponding to the new deposits on the books of the banks is the new reserves at the central bank. This means that the stock of money has increased relative to other assets held by non-bank entities, and that the non-bank private sector is in a better position to repay loans or other debt previously incurred. In other words, implementing this brand of QE assists the private sector to de-leverage.

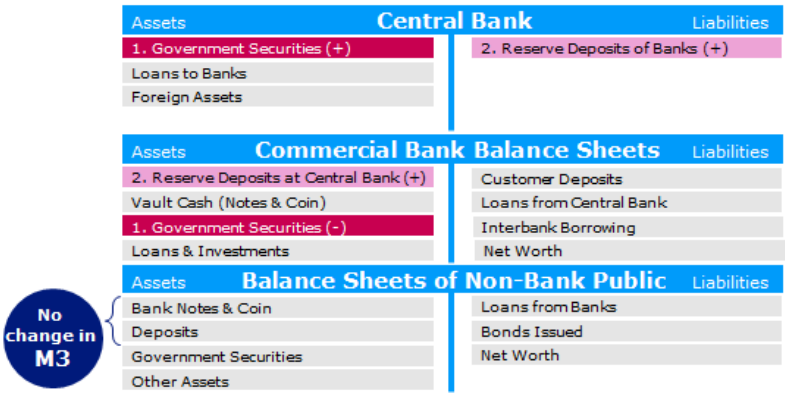


Figure 3. *An Asset Swap Operation – Non-Liquidity Enhancing*

Next consider the effects of the type of QE conducted by the BOJ or ECB. Once again the numbers in Figure 3 relate to the paired transactions set out in the T-form balance sheets.

1. The central bank purchases government or other securities from the commercial banks. Commercial bank holdings of securities decline; central bank holdings increase.
2. Commercial banks receive a credit from the BOJ or ECB for their sale of securities; reserve deposits of banks at the central bank increase.

Note that after these transactions the central bank's balance sheet has expanded, with increases in central bank assets matched by increases in liabilities, but the commercial banks' balance sheets have not expanded. Essentially there has been an "asset swap" conducted between the central bank and the commercial banks (exchanging government securities for reserve deposits on the books of the banks), but no impact on the non-bank public.

Now consider a variant of these transactions – the ECB's LTRO (Long Term Refinancing Operations) and Targeted-LTRO programs. In both cases the commercial banks submit collateral (e.g. securities held in their asset portfolios) to the central bank in exchange for loans (new liabilities for the banks). The central bank's intention was to encourage new lending by the commercial banks. In practice, however, Euro-area banks typically substituted the new, cheaper funding from

the ECB for inter-bank or other sources of funding, increased their holdings of reserves, and reduced their total loan portfolio (see Figure 4).

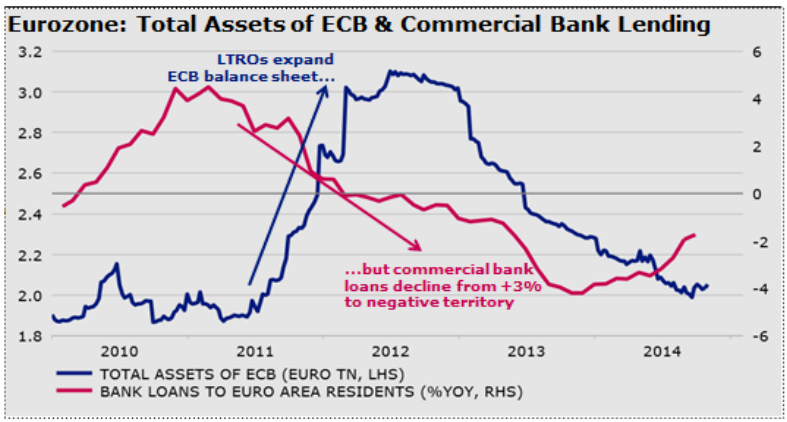
In the QE case commercial banks merely undertook an asset swap; they now held less government securities, but more reserve deposits at the central bank. In the LTRO case it was a combination of asset and liability swap; they borrowed funds from the central bank, and reduced their obligations to private sector lenders, while simultaneously taking the opportunity to shift the composition of their assets towards more reserves and less loans. In both instances, the balance sheets of the non-banks were unaffected. The key point is that under this style of QE or LTRO, the money supply (M2, M3 or M4) or purchasing power in the hands of the non-bank public has not increased.

Moreover, given the starting point of risk aversion by the banks and by firms and households, there can be no assurance that – even after these operations -- the banks will expand their lending or that any new deposits will be created. Equally, new investment or consumption spending is unlikely to follow. Even if banks were to expand their lending, this would be accompanied by a parallel increase in leverage by firms or households – the opposite of the balance sheet repair process that policy-makers should be seeking to achieve.

In short, comparing the two types of asset purchase operation, only purchases of securities from non-banks are consistent with both balance sheet repair and enhanced liquidity in the hands of firms and households. As mentioned earlier, in Britain banks generally do not hold long-term gilts because the capital risk is too great. In buying long-term gilts the BOE was therefore buying assets from non-banks, and avoiding an "asset swap". Essentially it was creating new deposits, or injecting new money into the hands of households and non-bank firms, and hence into the broader financial system, thereby creating more rapid money growth in the UK — just as the Fed did in the US. Alternatively, the Fed and the BOE were offsetting or preventing what might otherwise have been a monetary contraction, such as occurred in the US in 1931-33.

3. Developments on the balance sheets of Eurozone and Japanese Banks

We now turn to the implementation of balance sheet expansion and QE operations by the ECB and BOJ, and their impact or lack of impact on the respective banking systems.



Source: Datastream as at 17 October 2014.

Figure 4. *The Failure of the ECB's LTRO plan, 2011-14*

The ECB's LTRO program initiated in 2011, soon after Mario Draghi took over as President from Jean-Claude Trichet, and the more recent Targeted-LTRO programme are two good examples of the failure of central bank balance sheet expansion (a) when done in an environment of risk aversion, and (b) when the central bank's asset purchases or loans target only the commercial banks. As shown in Figure 4, the long-term refinancing operations (LTROs) in 2011-12 increased the ECB's balance sheet from two trillion to three trillion euros, but lending by commercial banks decreased from a growth rate of 3.2% year-on-year in September 2011 to -4.0% by September 2013. On this simple measure, therefore, LTROs did not work. Of course it could be claimed that the contraction of euro-area bank balance sheets would have been even greater without the LTROs, but equally asset purchases from non-banks would have guaranteed an increase in commercial bank deposits, helping to offset private sector de-leveraging.

As explained above, unlike the BOE or Fed asset purchases from non-banks, LTROs were basically a combination of "liability swap" and "asset swap": on the liability side the ECB made loans to banks (against collateral), but the banks reduced their borrowing from other sources, while on the asset side banks reduced their lending but increased their holdings of reserves at the central bank.

We now need to show that most of the asset purchases by the ECB or by the BOJ have in fact been from commercial banks. Figure 5 shows the decline in government securities held by euro-area banks and the simultaneous increase in ECB holdings of such securities. During the period between March 2015 (when the ECB's QE program started) and mid-May 2016 the ECB's portfolio of securities increased by Euro 723 billion, while the portfolio of securities held by commercial banks decreased by Euro 287 billion. However, while the ECB's was largely conducting a buy-and-hold strategy, the commercial banks were not only selling to the central bank, but were also replenishing their holdings regularly (e.g. at government auctions) in the market. We therefore cannot compute the aggregate sales by banks from the monthly balance sheet data of outstanding monthly holdings. All we can say is that at least 40% of ECB purchases (287/723) were from commercial banks.

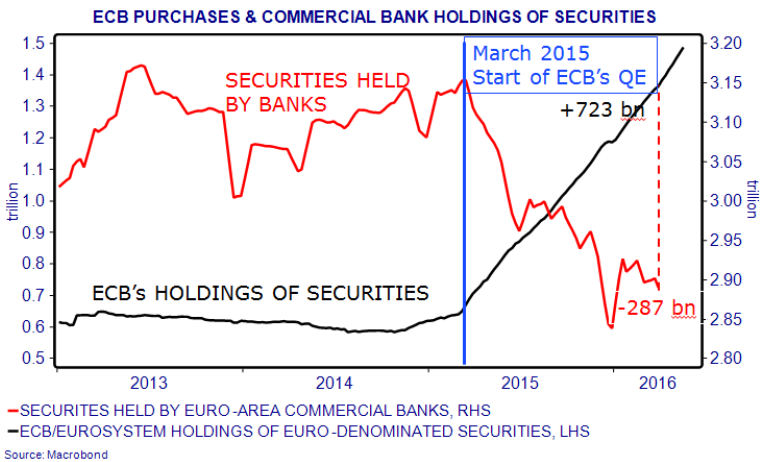


Figure 5. *The ECB's Asset Purchases Reduced Commercial Bank Holdings of Government Debt*

Turning from the aggregate euro-area data to country-specific data, Figure 6 shows that the balance sheets (total assets) of the Spanish banks are still shrinking. Meanwhile, their loans and holdings of securities – their two major asset classes – are also still declining. Between March 2013 and April 2016 holdings of securities have declined by EUR 109 billion (or 17%), and by EUR 47bn (or 8.8%) since March 2015 when the ECB started its QE operations. Together these facts illustrate the argument above that the ECB's QE program has not been adequately stimulative, and has not enabled or encouraged banks in some Eurozone economies to grow their balance sheets.

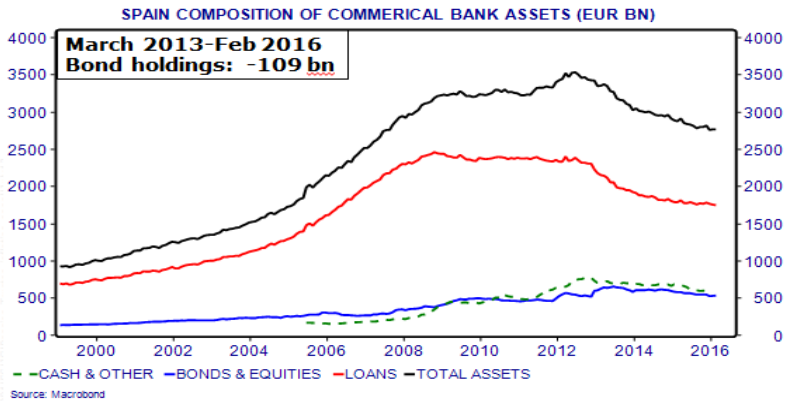


Figure 6. *The Contraction of Bank Balance Sheets in the Eurozone Needs to be Reversed*

Similarly, Figure 7 sets out the data for the Italian banks, this time in year-on-year rate of change form. Again, commercial bank holdings of securities are falling, although much more rapidly than total bank assets. Loan growth is marginally positive.

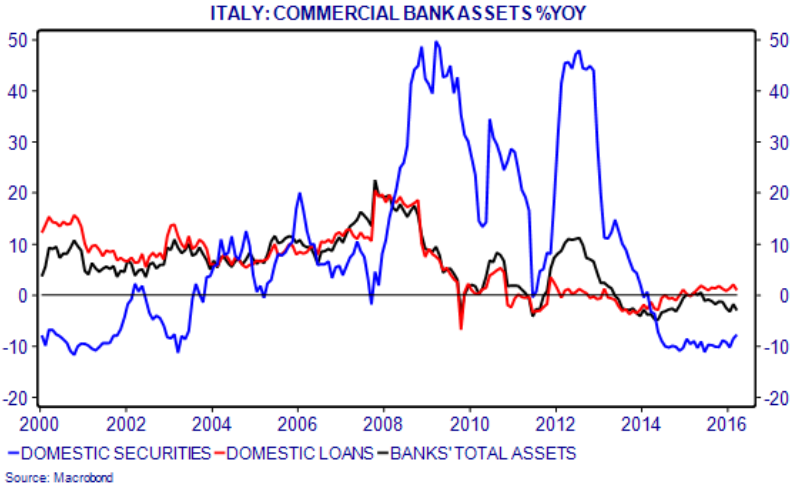


Figure 7. *ECB Buying Securities Mainly from Banks: Italian Bank Holdings of Securities Falling*

The risk aversion of Italian banks is shown in Figure 7 by (a) the slump in bank lending (in red) to corporate and household customers since October 2008, and (b) the rise in holdings of securities 2008-10 and again in 2012-13 (in blue). In parallel with the Spanish banks, holdings of securities at Italian banks have declined by EUR 170 billion (or 17%) since their peak in August 2013, and by EUR 45bn (or 5.2%) since March 2015 when the ECB started its QE operations.

Given the way the ECB is conducting QE, prospects for any acceleration in Eurozone M3 will depend on how successful the ECB is in generating bank lending in individual economies. However, in view of regulatory pressures on the banks combined with their own risk-aversion, it seems highly doubtful that the current approach will successfully enhance M3 growth. Even if it did encourage bank lending, the end-result would be higher leverage in the Italian non-bank sector.

IMF data shows that nearly 18% of Italian banks' loans were doubtful or non-performing in 2015, implying an urgent need for a proper clean-up of the Italian banking system. Such a clean-up is going to get harder in a much tougher regulatory environment from 2016 as the EU bail-in rules take effect, meaning the Italian government will no longer be permitted to

bail out the banks. Instead equity and bondholders must bear the first losses, converting debt to equity if required. Although a deal has been struck with the EU allowing the Italian government to guarantee the securitisation of bad loans, it remains to be seen if this will be enough.

Turning to the Bank of Japan, there are two main reasons why the expansion of the BOJ balance sheet has not translated into faster growth of M2 or M3 and banks' balance sheets.

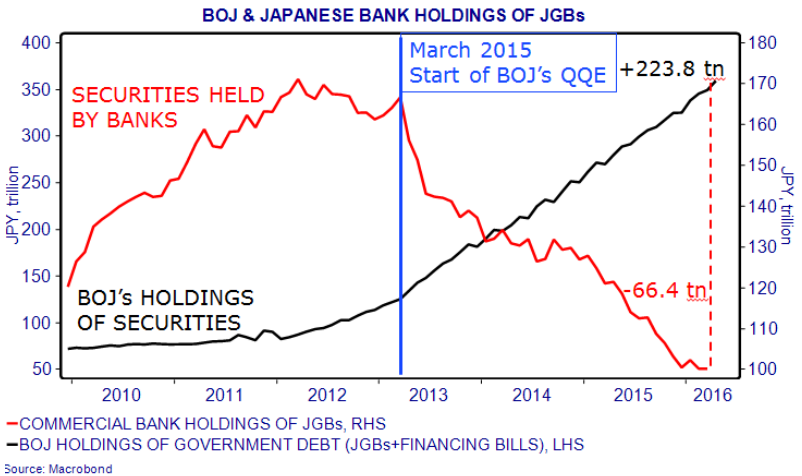


Figure 8. *BOJ Buying Securities Mainly from Banks; Bank Holdings of JGBs have Declined by JPY 66 trillion since March 2013*

First, instead of targeting non-bank holdings of Japanese government securities for purchase, the BOJ has purchased a considerable amount of these securities directly from the banks. As shown in Figure 8 Japanese commercial banks' holdings of JGBs fell from Yen 166.6 trillion in March 2013 to 100.2 trillion in February 2016, a decline of 66.4 trillion. In other words, in respect of a total BOJ balance sheet expansion amounting to 223.8 trillion since March 2013, between one quarter and one third is accounted for by commercial bank sales of JGBs. Banks have exchanged holdings of JGBs for increased reserve or current account deposits at the BOJ. There has simply been an asset swap. This does not increase the money supply in the hands of firms or households.

Second, a large proportion of the monthly purchases has been in the form of Financing or Treasury Bills (or "*tegata*"), again mainly purchased from the commercial banks. Since these are short-term securities they have to be continuously rolled over on maturity to maintain the expansionary effect. For example, in the fiscal year ended March 2015, while purchases of JGBs amounted to Yen 96.6 trillion and largely remained on the balance sheet, T-Bill purchases amounted to 101.8 trillion but only showed up as an outstanding balance of 49.7 trillion.

4. Why poorly designed QE programs have led to negative rates

It is no coincidence that the two main areas which are experiencing negative interest rates, sub-par growth and near-deflation – i.e. Japan and the Eurozone (plus the three euro-linked economies of Sweden, Denmark and Switzerland) – are also the economies where the two major central banks have implemented flawed versions of QE.

The fundamental problem is that the ECB and the Bank of Japan are trying to implement QE through the normal credit creation channels of the banking system. But these traditional transmission channels are not working – either because banks are risk averse and do not wish to lend, or because households and firms are still significantly leveraged and do not want to borrow. In these circumstances, the policy of relying on ever lower interest rates cannot be assured of success, even if rates are negative. Given that the standard transmission system for monetary policy through the banking system is broken, central banks need to circumvent the banks if they are to create new deposits and new purchasing power, restore normal economic growth, and return to 2% inflation and normal levels of interest rates.

The right way to do this is not to focus policy on ever-decreasing interest rates, but instead to create money directly by purchases of securities (or indeed any other asset) from non-banks – thereby creating new deposits in the hands of firms and households. Although they did not explicitly articulate their

policies in this way, this is in effect what the Fed and the Bank of England did in 2008-13. In other words it would be better for the BoJ and the ECB to focus on the quantitative effects of QE, not the interest rate effects. To put it differently, QE is (or should be) about expanding purchasing power in the economy or money in the hands of the non-bank public, not lowering rates and hoping the banks will expand lending.

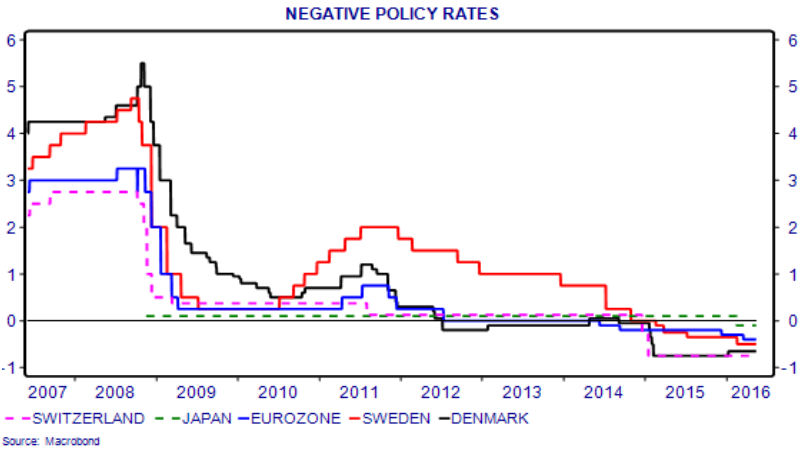


Figure 9. *Major Central banks in Japan and Europe have Adopted Negative Policy Rates*

Currently there are five economies employing negative policy rates: Japan, the Eurozone, and the three euro-linked economies of Denmark, Switzerland, and Sweden. The first major economy to implement negative rates was Denmark in 2012, followed by the Eurozone in 2014. Next Switzerland and Sweden followed suit. Then in January 2016 the Bank of Japan introduced negative rates.

In essence, the central banks of these economies charge the commercial banks for reserve deposits held at the central bank, although in some cases only a part of these balances is subject to negative rates (or penalty charges). The conventional motivations for the policy are twofold: first, to stimulate economic growth (based on the view that lower nominal rates will somehow encourage higher spending), and second to deter capital inflows and currency appreciation. Japan and the

Eurozone fall into the first camp, while the two Nordic countries and Switzerland fit the second. This means that almost a quarter of the world's GDP is produced in economies with negative rates.

Central bankers appear to believe that if banks face a charge on their deposits at the central bank they will be induced to hold lower reserve deposit balances, and somehow "lend out" some those funds. But there are two fundamental fallacies here. First, banks do not lend out reserves. Second, the total volume of reserve deposits is set by the central bank, not by the commercial banks. If the central bank buys more assets (e.g. via foreign exchange intervention or under a QE program), total reserve deposits will rise, and conversely if the central bank sells assets, total reserve deposits will decline. Assets and liabilities must match. Although individual banks can reduce their reserve balances, collectively they cannot reduce the aggregate reserve balance. The reduction in any one bank's balances (e.g. to pay for a security) will be matched by the increase in another's (the seller's) balance.

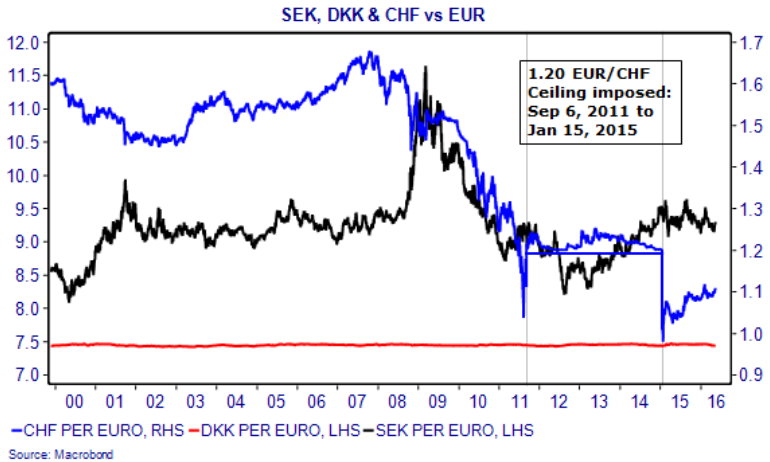


Figure 10. *In Switzerland, Sweden and Denmark Negative Rates Result from Pegging to the Euro*

The Danish Krone (shown in Figure 10 in red) is explicitly pegged to the euro at DKK7.46 with a trading band of 2.25% on

either side, which means that Denmark imports the monetary policy of the ECB. If there is a threat of DKK appreciation – as there was in 2012 and 2015 -- then Denmark must cut its interest rates below those of the ECB. This is in essence why Denmark became the first country in Europe to move to negative rates.

In Sweden there has been a floating exchange rate since 1992 when the Riksbank was forced to break its fixed peg with the Deutschemark. However, monetary policy is aimed at keeping inflation at a targeted 2%, virtually the same inflation target as the ECB's, which means in effect that the two currencies have to move together in broad measure. Therefore many in the markets see the Swedish Krone (shown in black in Figure 10) as a de facto managed exchange rate regime. From the inception of the single currency in 1999 the Swedish currency was relatively stable against the Euro until 2008 when it depreciated to 11.65 in March 2009 and then recovered from mid-2009 and through 2010. Since 2011 the SEK has traded in the range 8.30-9.60, a wider range than in 2002-07, but nonetheless a trading range.

The Swiss franc has also had to be managed against the euro. While it remained fairly stable until 2007 there was little problem, but after the outbreak of the global crisis in 2007-08 the CHF was widely viewed as a safe haven, and appreciated strongly, eventually forcing the Swiss National Bank to impose a ceiling of 1.20 euros per CHF in September 2011. However, when the ECB was contemplating the adoption of QE in late 2014 and the euro started falling steeply, the SNB abandoned the 1.20 ceiling on January 15, 2015.

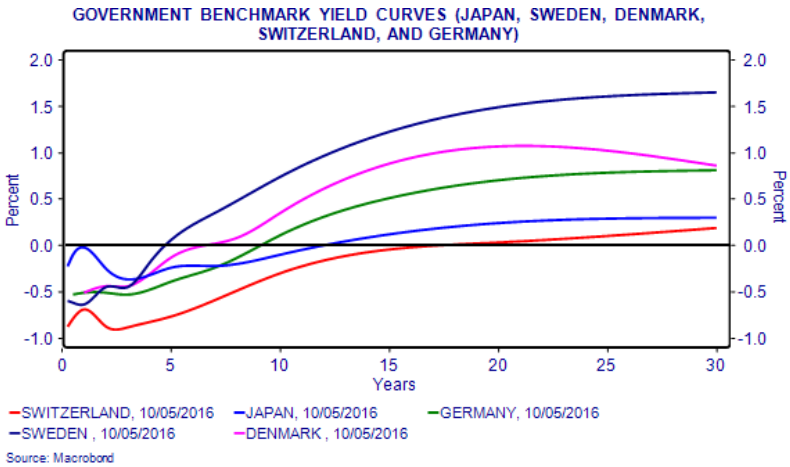


Figure 11. *Negative Policy Rates and Expectations of Deflation have Created Negative Bond Yields*

The traditional orthodoxy has been that if banks introduced negative rates on deposits, depositors would shift their money from deposits into physical cash. So far, however, this kind of large-scale shift has not occurred, at least at current levels of interest rates.

Nevertheless, the knock-on effect of negative policy rates, low inflation expectations and weak credit demand is that yield curves have become negative for the affected economies at the short end of the curve.

Also in Denmark there has been the remarkable situation of mortgage holders being credited with interest payments by their bank (albeit offset by some "fees"). In Switzerland most banks have resisted passing on negative rates to their depositors. However one bank, Alternative Bank Schweiz AG, is charging clients for holding their money on deposit. In Germany insurance companies are feeling the pinch. According to the Bundesbank, "some [insurance] companies need to generate investment returns of more than 5% to survive" (Wall Street Journal, March 25, 2015), which implies serious doubts over the sustainability of their business models in the current environment. A shift into riskier assets is prevented by Solvency II rules that act as a major constraint on the types of asset they can acquire. In Japan the adoption of

negative rates in January 2016 caused a spike in the price of 40-year JGBs as insurance companies and pension funds have shifted their portfolios to take on greater risk, in this case added duration risk.

5. Summary & Conclusion

Central bank purchases of assets or securities from commercial banks are far less effective in expanding the money supply or purchasing power in the economy than purchases from non-banks. Not only do purchases from non-banks directly expand the volume of deposits, and thereby expand the money supply, but they also do this without adding to leverage.

Unfortunately, for institutional or other reasons, both the BOJ and the ECB are still concentrating much of their asset purchases on financial instruments held by banks rather than by non-banks, effectively undermining or diluting the effectiveness of their QE programs. The failure of these programs to restore normal growth and inflation has led, inexorably, to the adoption of negative interest rates in Japan and the Eurozone, and also in those economies such as Denmark, Sweden and Switzerland whose currencies are closely pegged to or managed in relation to the euro.

Negative rates are a fundamentally misconceived strategy because they aim to induce banks to increase lending and expand their balance sheets by adding to leverage in the non-bank private sector. In an environment of risk aversion by lenders and borrowers the policy of reducing interest rates to negative levels will not necessarily expand money and purchasing power, and could simply lead to even lower rates by putting pressure on banks (through reduced net interest margins) to contract their balance sheets still further.

By far the best policy would be for the ECB and the BOJ to redesign their QE programs to purchase securities from non-banks rather than banks. This would guarantee faster money growth, ensure the escape from deflation, and eliminate the need for helicopter money.

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2 History Rhymes – A Comparison of China Today with Japan in the 1920s

1. Introduction

The Chinese currency has been depreciating fairly continuously since January 2014 when it peaked at a value of CNY 6.04 against the US dollar. Today it trades at 6.87, a depreciation of 12% from its peak.

At the same time, China's external balance of payments has become significantly weaker, with a substantial decline in the current account surplus relative to GDP since 2010, and more recently persistent private sector capital outflows requiring the central bank both to intervene to stabilise the value of the currency, and to tighten controls on capital outflows.

The question is: how long will the Chinese Yuan (CNY or RMB) continue to depreciate, and how long will the Chinese authorities be willing to run down China's huge stock of exchange reserves?

For a clue to the answers it is useful to consider some interesting parallels between the economic experience of Japan in the 1920s and the recent experience of China. Based on that historical episode from Japan in the 1920s, it seems likely that

China's problems on its external accounts, and the consequent implications for the currency, could continue for several more years.

2. Japan's External Disequilibrium in the 1920s

From 1897 until 1931 the Japanese monetary system was based – at least formally - on the gold standard. The gold parity (shown by the gold dashed line in Figure 1) was set equivalent to US$49.85, meaning that 100 Japanese yen could be exchanged for a certain weight and fineness of gold which in turn could be exchanged for essentially an equivalent, fixed amount of US$ (USD). In modern terminology we would say that the yen was fixed at US$ 49.85 for 100 Japanese yen (JPY), or very close to JPY 2 per USD.

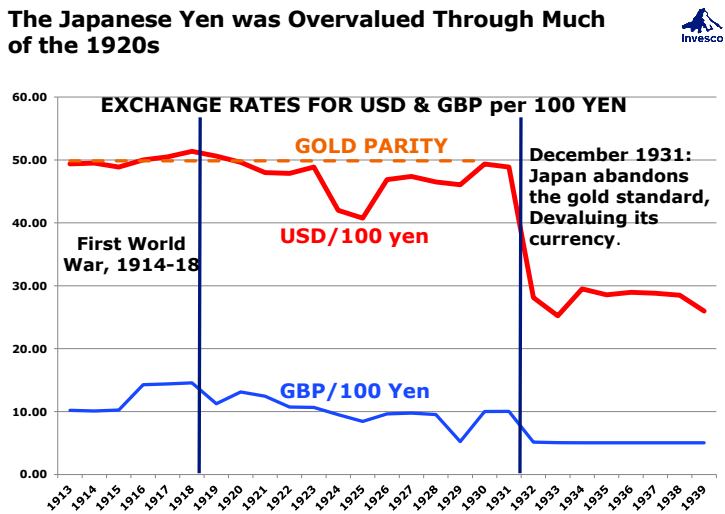
The Japanese Yen was Overvalued Through Much of the 1920s
Invesco
EXCHANGE RATES FOR USD & GBP per 100 YEN
GOLD PARITY
December 1931: Japan abandons the gold standard, Devaluing its currency.
First World War, 1914-18
USD/100 yen
GBP/100 Yen
60.00
50.00
40.00
30.00
20.00
10.00
0.00
1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939

Figure 1.

Japan entered the First World War Japan in August 1914 as an ally of Britain with the aim of taking over German-controlled territories in the Asia-Pacific. By now an industrialised economy, Japan was able to sell all kinds of goods – including war materials – to several participants in the

conflict. The result was a steep increase in foreign earnings, and upward pressure on the currency.

However, under the rules of the gold standard (which Japan maintained until September 1917, when the US also left the gold standard), Japan could not permit its currency to appreciate, and instead allowed the foreign currency inflows to translate into faster money and credit growth, which produced considerable inflation. As a result, after the war was over, Japan found itself with an internal price level that was too high, at prevailing exchange rates, to be competitive. Consequently, throughout the 1920s there was downward pressure on the exchange rate which the Bank of Japan helped to absorb with sales of gold. Therefore while the US (in June 1919) and the UK (in April 1925) returned to the gold standard at their pre-war parities, Japan chose not to do so until January 1930. Ultimately, after struggling with an overvalued exchange rate for just over a decade, the Japanese authorities abandoned the attempt to restore or maintain the pre-war fixed parity with gold, and devalued the currency in December 1931. From then onwards until April 1949 the Japanese currency was essentially on a paper standard.

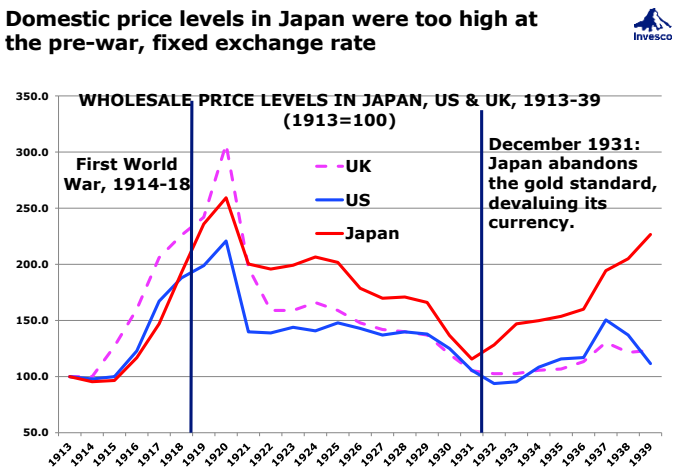
Domestic price levels in Japan were too high at the pre-war, fixed exchange rate
Invesco
WHOLESALE PRICE LEVELS IN JAPAN, US & UK, 1913-39
(1913=100)
First World War, 1914-18
UK
US
Japan
December 1931: Japan abandons the gold standard, devaluing its currency.
350.0
300.0
250.0
200.0
150.0
100.0
50.0
1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939

Figure 2.

During the First World War price levels in the UK, the US and Japan increased dramatically. Not surprisingly the UK led the way (Figure 2), but American and Japanese prices followed with a lag of about a year. After the war ended, prices continued to rise until the abrupt and deep recession of January 1920 to July 1921 (based on NBER cycle dates for the US). Thereafter price levels in all three countries fell steeply, but they fell less in Japan than in either the US or the UK, leaving the Japanese economy attempting to compete at the pre-war exchange rate but with a price level that, in 1922, was 41% higher than US prices, and 23% higher than UK prices.

Inevitably this meant that Japan suffered continuous trade deficits and capital outflows during the 1920s, which in turn meant the Bank of Japan was selling gold, thereby slowing the rate of growth of money and credit, and deflating the economy. However, a series of financial and natural disasters such as the bank runs of 1922, the Great Kanto Earthquake of September 1923, and the Showa Financial Crisis of 1927 forced the authorities to ease financial conditions periodically, further delaying the international adjustment of the economy. The contradiction between the need for internal deflation to restore competitiveness and restoring growth was only resolved when Finance Minister Takahashi Korekiyo, following the British example of September 1931, ordered the abandonment of the gold standard and the devaluation of the Japanese yen in December 1931. This effectively lowered the Japanese price level (in foreign currency terms) to a level that was at last internationally competitive.

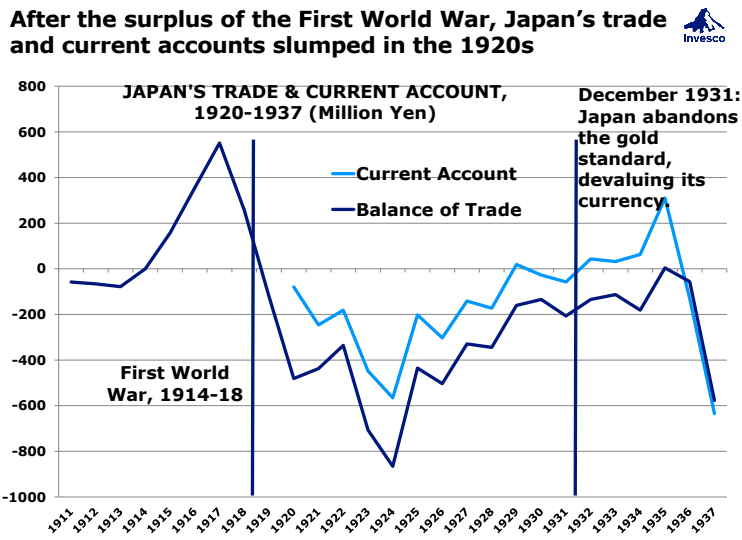

Figure 3.

Under the gold standard "rules of the game" countries were obliged to monetise net inflows, so large trade or current account surpluses translated into rapid monetary expansion while large trade or current account deficits had the opposite effect. Of course there were capital flows that might offset or reinforce the trend, but capital flows were substantially smaller in the gold standard era. Consequently we may obtain a reasonably clear idea of the pressures on the Japanese monetary system simply by reviewing the trends on the trade and current accounts of the balance of payments.

Between 1913 and 1918 Japan's exports quadrupled. As Figure 3 shows, Japan's trade account moved to a trade surplus of 551 million yen in 1917. However, it completely reversed over the next seven years to 1924 when the trade deficit hit 866 million yen. This was the direct effect of prices in Japan being too high or uncompetitive at the pre-war fixed exchange rate. Gradually as prices fell and domestic demand weakened the trade balance began to improve between 1925 and 1931, but the depressed state of agriculture, the high levels of unemployment, and the

political and social instability put pressure on the authorities to ease monetary conditions from time to time. Finally in December 1931 Finance Minister Takahashi's devaluation of the yen created the conditions for the current account to shift to surplus and the economy started to expand more vigorously.

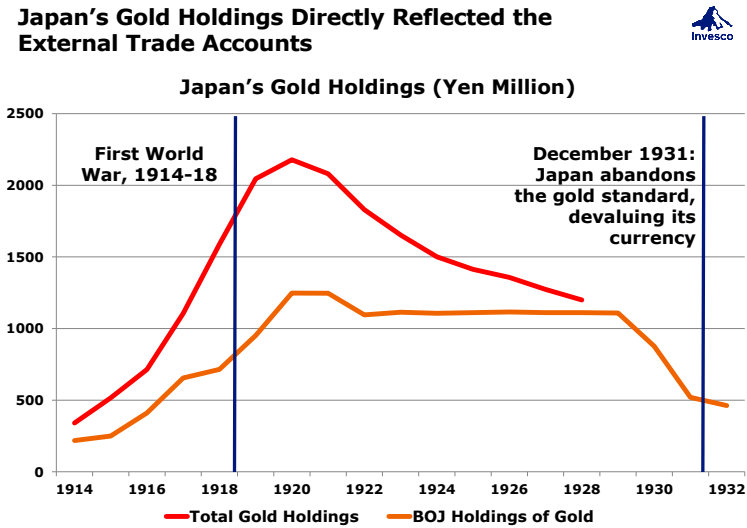

Figure 4.

Thanks to the huge surpluses on Japan's external accounts during and immediately after the First World War, Japan's stock of gold increased enormously (Figure 4). From a level of 341 million yen in 1914, Japan's total gold holdings increased to a peak of 2,178 million in 1920, but from then onwards they fell continuously through the entire 1920s until Japan abandoned the gold standard in December 1931, by which time the Bank of Japan's holdings had fallen to 519 million yen. In simple terms, this steady loss of reserves directly reflected the overvaluation of the yen against other currencies, and the relatively weak competitive position that Japan found itself in throughout the decade. The deflationary pressure that the monetary squeeze imposed also explains the slow growth of Japanese economy

during this decade, and the growing social and political unrest that blighted Japanese politics during the 1920s.

3. China's Domestic and External Disequilibria since 1994

Turning to the Chinese parallels with Japan, after the devaluation of the Chinese RMB and the unification of the country's external exchange rates under then vice-premier Zhu Rongji in 1994, China maintained a fixed exchange rate against the US dollar until July 2005 (see Figure 5). Effectively the country was now on a fixed US dollar standard, just as Japan had been on the fixed gold standard for most of World War 1. The undervaluation achieved in

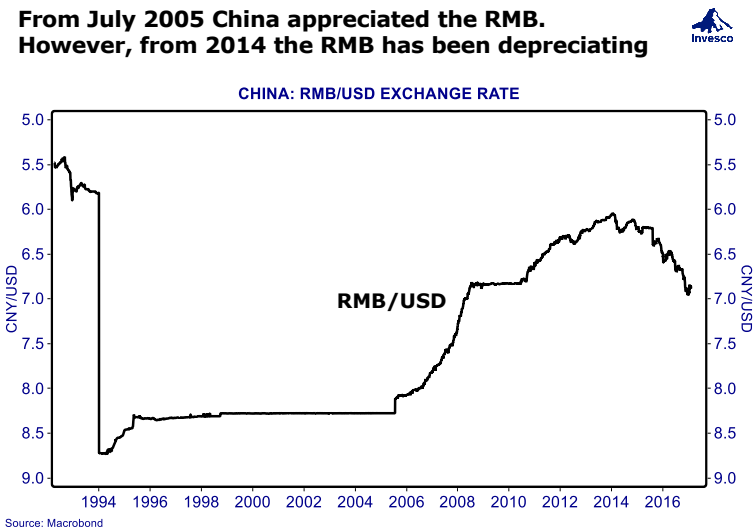

Figure 5.

1994 together with the subsequent dramatic double-digit growth rate of the Chinese economy and rapidly growing productivity soon translated into substantial external surpluses. The People's Bank initially aimed to deal with the inflows through the issue of sterilization bonds, starting in

September 2002. However, this was not enough to prevent excessive growth of money and credit, and consequently the authorities embarked on a policy of sustained increases in bank reserve requirement ratios (RRRs) and gradual appreciation of the Renminbi (RMB) from July 2005. Even so, the external surpluses on current account continued throughout the period of currency appreciation, which was only reversed from 2014. The recent RMB depreciation along with the steady reduction of China's stock of foreign exchange reserves is highly reminiscent of Japan's experience between 1920 and 1931.

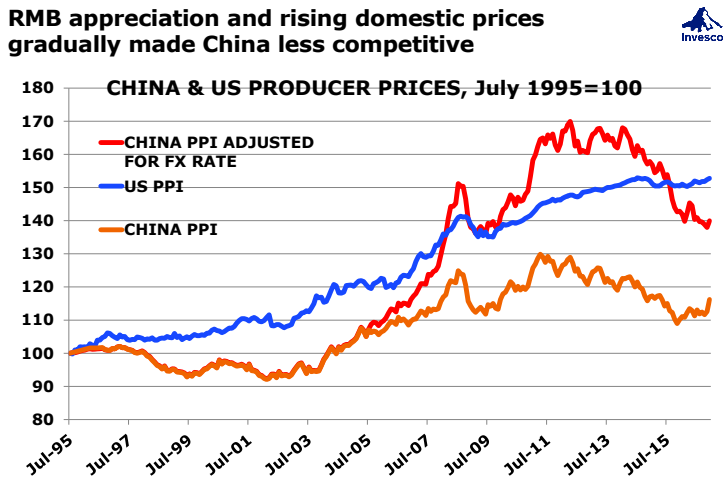

Figure 6.

If China's producer prices are set equal to US producer prices in July 1995, roughly 18 months after the RMB devaluation, we can plot their relative progress until July 2005 when the RMB was revalued upwards. This comparison is shown in Figure 6 above by the brown line (China) and the blue line (US). It is clear that at least on this measure China was gaining competitiveness over most of the period 1995-2005. However, to obtain a fair comparison from July 2005 onwards

the Chinese price level must be adjusted by the appreciation of the RMB. This is shown by the red line in the chart.

Prior to the Global Financial Crisis (GFC) of 2008-09 the adjusted Chinese price level only briefly exceeded the US price level, but, following a pause when the RMB was held steady against the USD in 2008-10, the adjusted Chinese producer price level began rising, exceeding the US producer price level by as much as 15% by April 2012. This was the result of further RMB appreciation, which resumed after June 2010 until February 2014, together with the effect of higher inflation in China prompted by the RMB 4.5 trillion fiscal and monetary stimulus policy of 2008-2010.

Today the overvaluation of China's producer prices -- expressed in US dollar terms -- has reversed, thanks not only to the depreciation of the RMB since 2014, but also thanks to four and a half years of declining Chinese producer prices between February 2012 and September 2016. However, it is not clear that these two price indices, even adjusted for currency movement, constitute an accurate assessment of relative competitiveness.

One reason why the foregoing price comparison may not be a satisfactory way to compare competitiveness is that a large portion of the Chinese producer price index is accounted for by the price of imported raw materials which are mostly set in international commodity markets, whereas the US index of producer goods is mainly comprised of finished goods prices that are set mostly by domestic demand. For a better measure of relative competitiveness it would be desirable to employ a price index that combined labour costs with internationally traded goods prices, but such an index is not readily available.

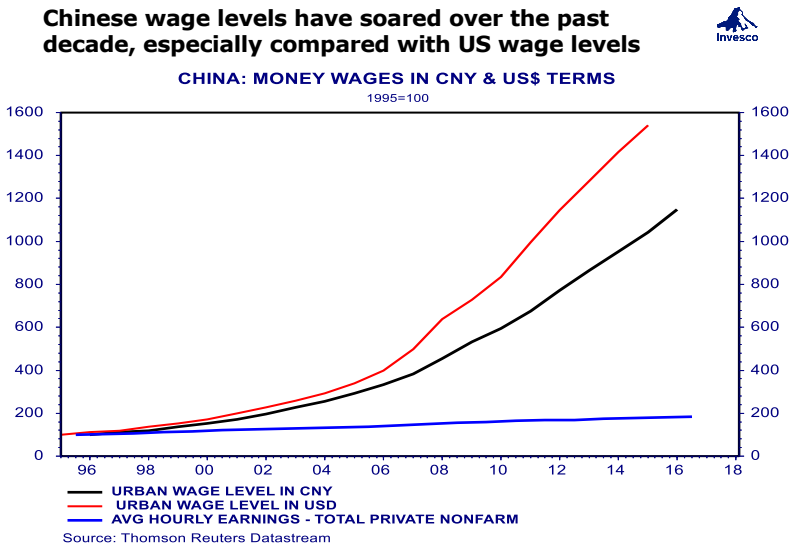

Figure 7.

However, we can compare the relative movement of US and Chinese labour costs over the period since 1995. As Figure 7 above shows, Chinese labour costs (the black line) have soared by comparison with US labour costs (shown in blue), even before adjusting for currency movements (the red line). On a superficial level, it is clear that China's cost base has risen hugely compared to the US, and hence the country's relative competitiveness must have been significantly eroded. But the Balassa-Samuelson theory tells us that, given the much greater increases in Chinese productivity compared with the US productivity over the period, Chinese labour costs could have outstripped US labour costs without eroding Chinese competitiveness as much as is indicated in the chart. The question is, how much could Chinese labour costs have risen relative to US labour costs without undermining competitiveness? Given the primitive nature of these data, and the difficulty of gauging the contribution of Chinese labour costs and productivity to overall costs and competitiveness, it would be naïve to expect a definitive conclusion.

Returning to more solid data, China's external surplus on current account, although still positive, weakened from 9.5% of GDP in 2007 to just 1.5% in 2013 and 3.1% in 2015 (as shown in Figure 8). More recently as China's private sector capital accounts have shifted from net inflows to net outflows the overall balance of payments has weakened and the People's Bank (the central bank) has been intervening in the foreign exchange market -- not to keep the RMB from rising, but to limit its depreciation.

In essence this is analogous to the role of the Bank of Japan in the 1920s after Japan's external surpluses disappeared and the country started experiencing current account deficits and downward pressure on the currency.

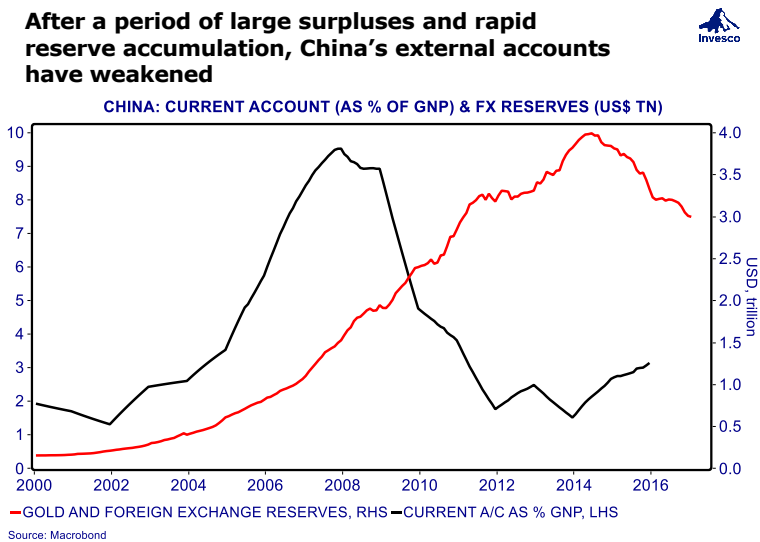

Figure 8.

A key difference is that whereas in the 1920s the Japanese authorities were continuously trying to restore the pre-war fixed exchange rate, today China has no such commitment to any particular exchange rate. This should enable China to achieve equilibrium between its internal price level and prices

overseas much sooner. However, there are two problems with this view. First, China allowed the external surpluses to build for so long that its countervailing strategies (such as sterilization and sustained appreciation of the currency) created large and intractable distortions in the economy – principally massive excess capacity in many basic industries and heavy indebtedness, both of which will take a long time to overcome. Second, there are distinct limits to China's willingness to allow the exchange rate to depreciate. Together the scale of China's problems, plus the record of the Japanese experience in the 1920s, suggest that resolving China's problem of external disequilibrium will take much longer than just a year or two.

4. Summary & Conclusion

During the First World War Japan experienced large surpluses on its external accounts which, via monetary expansion, drove up its prices to an uncompetitive level compared with other leading economies such as the US and the UK. Similarly, following China's devaluation of the RMB and exchange rate reunification of 1994, and the adoption of a fixed rate against the USD, China gradually built up huge external surpluses, which continued even after the 2005-14 appreciation of the currency.

For Japan in the 1920s the result of the overvaluation was a decade of financial crises, slow growth, agricultural depression and deflation. Only in December 1931 did the authorities finally abandon the fetish of returning to the pre-war exchange rate, and devalue the yen, allowing Japan's external accounts to return to equilibrium.

Based on the above analysis, China today is faced with essentially the same set of choices as Japan in the 1920s. These can be set out as two broad, polar extremes:

- One option is to maintain the current USD fixed exchange rate (or a stable index level against a currency basket), preserving the status quo in the domestic economy – i.e. widespread state ownership of large-scale enterprises, state direction of credit, and extensive capital and financial controls.

Such an adjustment path would imply a long, slow disinflation (relative to foreign economies) with a persistent rundown in the stock of foreign reserves.

- The second option is to move much more quickly to external equilibrium, allowing the external exchange rate to fall in line with market forces, to lift a whole range of controls while re-structuring the state-owned sector and thereby ending the distortions that have built up over the past two decades. Such a strategy would enable China to emerge as a far more market-oriented economy, able to make adjustments to external competitive or technological challenges more rapidly in the future.

In practice, China appears to be adopting a middle road somewhere between these two polar extremes. My view is that China will choose a path closer to the first option (preserving controls, maintaining the state-owned sector, managing the exchange rate and running down the reserves) than the second (free market) option. An intermediate or middle road between the two options will inevitably imply conflicts between means and ends, but it will nevertheless be preferable, from an official Chinese standpoint, to adopting the first option alone.

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3 Dollarize Argentina: Abolish the B.C.R.A.

The stability and value of the Argentine peso has been repeatedly undermined by successive governments in Buenos Aires relying on the monetary powers of the Argentine central bank, Banco Central de la República Argentina (BCRA), to create money to make up for revenue shortfalls of high-spending administrations. Since January 2018 alone, the value of the Argentine peso has plunged from an official rate of ARS19.6 per USD to 350 per USD in November 2023. But the official rate is not a market rate. The "blue" rate for the Argentine peso, a parallel or more realistic exchange rate has recently been trading at 910 for buying and 960 for selling. Probably a free-market rate would be somewhere between the official and the "blue" rate. In either case, the peso has depreciated drastically. As Keynes wrote, "By a continuing process of inflation, government can confiscate, secretly and unobserved, an important part of the wealth of their citizens". The process of inflation transfers purchasing power directly from private sector holders of money to the government. It is, in effect, outright robbery.

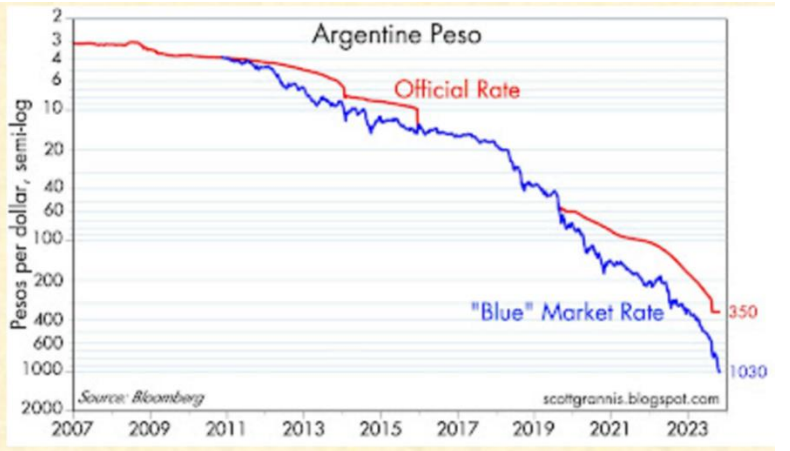

Figure 1. The Depreciation of the Argentine Peso.
Source: Calafia Beach Pundit https://scottgrannis.blogspot.com/

The presidential election of November 19 creates an opportunity for the Argentine people to end the persistent abuse of their currency once and for all. The people of Argentina must never again allow their government to abuse the central bank at their expense. The best way to do this would be to move to a monetary system where the government or fiscal authorities have no access to a central bank. In Argentina's case, this means abolishing the BCRA and dollarizing the economy as first proposed at the invitation of Pres. Carlos Menem by Steve H. Hanke and Kurt Schuler in 1999.

In the future the government would maintain its accounts at various commercial banks, which would act as paying agent for the government, as they do for any other customer (as happens in Hong Kong and Panama). Such a move would strengthen fiscal discipline, imposing a hard budget constraint on the government. In future, government finances will be sourced solely from (1) tax revenues and earnings of public sector corporations, (2) drawing down on accumulated past surpluses or (3) issuing USD-denominated debt to finance deficits. The government would no longer be able to rely on the central bank as a clandestine, hidden source of funding.

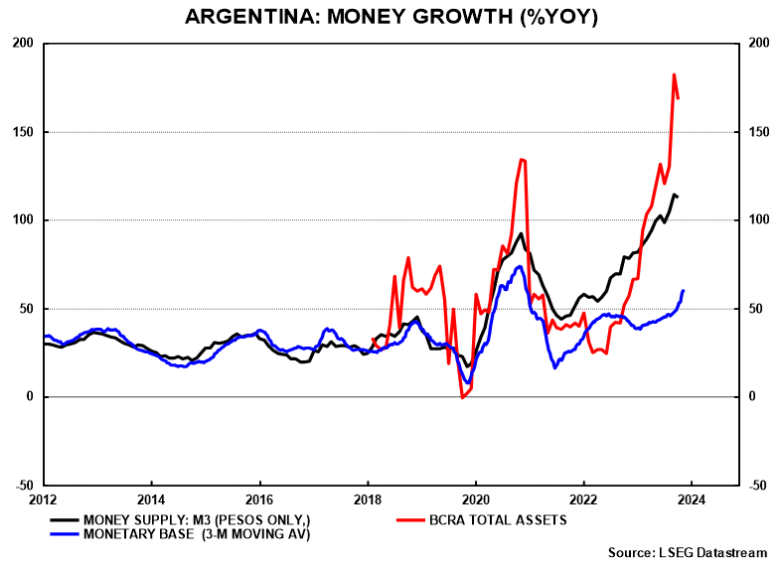

Figure 2. Successive governments have engineered excess money growth.

In carrying out these monetary and fiscal reforms, politicians and administrators would be compelled to engage in serious institutional changes – possibly amounting to constitutional amendments. No longer able to print money to fund projects at will, Argentine governments would be compelled to move their budgets much closer to balance. The budgetary oversight process could be strengthened, and a much higher degree of transparency could be introduced. While such reforms are not a cast-iron guarantee against abuse or corruption in future, they would eliminate monetary tampering. Excess fiscal spending is still possible (as has occurred in Ecuador and Panama), but only by running up large debts and persuading foreign governments and foreign investors to part with their funds. At the least, ending government access to the central bank would eliminate the kind of abuse that has led to repeated cycles of growth, debt, and devaluation because the nation's currency would no longer be Argentine pesos. It would be US dollars whose value is beyond the control of Argentine politicians, and the BCRA would no longer exist.

At this stage it should be mentioned that if dollarization is not carried out in the next year or so, there is a non-negligible chance that dollarization may be forced even on an unwilling government by circumstances. For example, the Argentine people already hold substantial quantities of US dollars (said to be worth between $200 and $260 billion) in physical cash and deposits. Yet despite all the government restrictions on use of the US unit and multiple, discriminatory exchange rates, they are still able to conduct many transactions in US dollars. The authorities are fighting a losing battle to keep the peso.

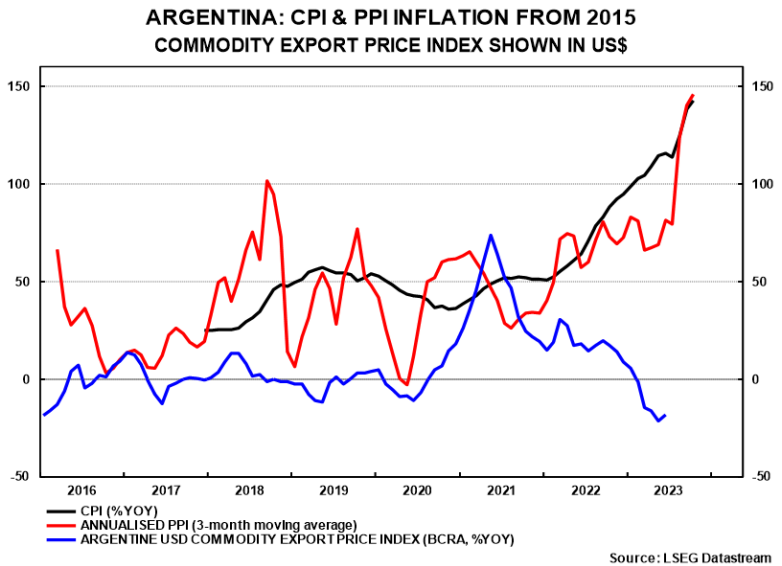

Figure 3. Excess money growth has generated high inflation.

2. Dismantling the BCRA

Basic Principles

Over past decades the BCRA has acquired many functions in addition to its narrow monetary functions. We now propose to dismantle the central bank, eliminating its money-creating powers and shifting its other activities to alternate agencies. Table 1 shows the balance sheet of the BCRA as published for October 23, 2023, while Table 2 shows its assets and liabilities

grouped according to function, as indicated in the coloured panels A-F on the right, helping to clarify what needs to be done as outlined in Section 2.2.

The process of dollarization requires the recognition and adoption of two basic principles. First, an announcement should be made that all contracts currently in pesos will be converted by decree to USD contracts at a fixed exchange rate at a future date (Dollarization-day or D-Day) and time to be specified. Second, after a period of (say) 30 days from the date of this announcement, the prevailing exchange rate will be adopted as "the" exchange rate which will be used to convert all existing peso contracts into USD contracts from that day forwards. This is exactly what was done in the case of Bulgaria in 1997, on Steve Hanke's advice, to determine the new, fixed exchange rate. The outcome was a very rapid fall of consumer price inflation from over 2000% in 1997 to 22% by March 1998, 4% by August 1998, and an average of 2.5% for the year 1999 as a whole.

During the one-month period of floating, the monetary base should also be frozen, again as was done in Bulgaria, effectively mothballing the BCRA immediately.

Table 1. Balance Sheet of BCRA

Balance Sheet of BCRA on 23 October 2023 (Units: Pesos billion, with FX translated at 350 ARS per USD)			
Reservas Internacionales *Gold and FX Assets*	8,593	Base Monetaria *Monetary base*	7,054
Of which Gold	1,372	Billetes y Monedas *Banknotes and coin*	5,900
And Foreign Exchange	7,221	Cuentes Corrientes *Banks' reserve accounts*	1,154
Titulos Publicos *Government Securities*	39,432	Medios de pago en otros monedas *Means of Payment in FX*	8
Of which Letras Intransferibles/*Non-transferable Bills*	23,542	Cuentas Corrientes en Otras Monedas *FX Deposits*	3261
Adelantos transitorios	4,091	Depositos del Gobierno Nacional	1,905

Temporary advances to the national Govt		*Govt Deposits*	
Creditos al Sistema Financiero del Pais *Credits to the Domestic Financial System*	2	Otros Depositos Varios *Various other deposits*	7
Aportes a Organismos Internacionales *Contributions to International Orgs*	1,880	Asignaciones de DEG (=SDRs) *SDR Allocations*	146
Financieros Derivados *Financial Derivatives*	173	Obligaciones con Organismos Internacionales *Obligations to International Orgs*	1,108
Operaciones de Pase *Repo Operations*	11,187	Titulos Emitidos por el B.C.R.A. *Securities Issued by the B.C.R.A. (LELIQs)*	24,092
Otros Activos *Other Assets*	1,367	Contrapartida de Aportes del Gobierno Nacional a Organismos Internacionales/*Counterpart of Contributions from the National Govt to International Organizations*	1,433
		Obligaciones Provenientes de Otros Instrumentos *Other derivatives*	12
		Obligaciones por Operaciones de Pase *Obligations for Repo Op'ns*	10,115
		Deudas por Convenios Multilaterales de Credito/*Debts for Multilateral Credit Agreements*	4
		Other liabilities & provisions (=8,498+23)	8,521
		Total Liabilities	**57,667**
		Capital	9,060
Total Assets	**66,726**	**Liabilities & Capital**	**66,726**

Table 2. The BCRA's Balance Sheet Classified by Function

Total Balance Sheet of BCRA (Units: Pesos bn with FX translated at 350)				
FX Assets allocated to covering monetary base	7,054	Monetary base	7,054	A.Monetary Assets and Liabilities
		A.1 Cash Currency	5,900	
		A.2 Banks' reserves	1,154	
"Non-Monetary" Activities of BCRA				
Credit to financial system	1,903	Government deposits	1,905	B. BCRA as banker and provider of credit
Adelantos transitorios (Temporary advances to the national govt)	4,091	Other deposits	7	
		DEG (=SDRs)	146	
Residual FX assets after matching monetary base (=8,593*-7,054)	1,539	Means of payment in FX	8	C. BCRA as FX agent of Govt
		FX deposits	3,261	
		Other FX liabilities	1,108	
		Other FX (1,433+4)	1.437	
Government debt	39,432	LELIQs	24,092	D. BCRA as operator of LELIQ, derivatives & repo markets
		Other derivatives	12	
		Repos	10,115	
Other assets	12,707	Other liabilities & provisions (=8,498+23)	8,521	E. Other items
		Total Liabilities	**57,667**	F. Summations
		Capital	9,060	
Total Assets	**66,726**	**Liabilities & Capital**	**66,726**	

*This is the total amount of gold and foreign exchange assets listed on the BCRA's balance sheet on 23 October 2023, converted to pesos at 350 per USD. All figures in Table 2 correspond to data in Table 1.

In essence this means that all peso obligations of the BCRA (and the government) will be converted to USD obligations. However, there is one exception: the outstanding peso banknotes which are liabilities of the BCRA will need to be paid out as rapidly as feasible in USD banknotes. All other items on the balance sheet of the BCRA – or on the balance sheets of

commercial banks or companies or individuals – constitute "claims" or I.O.U.s for Pesos (or ARS) and can therefore readily be translated at the selected D-Day exchange rate to USD-denominated claims or I.O.U.s. This applies to all contracts, public and private, whether for deposits, loans, rents, wages, interest, and dividends, or complex instruments such as futures contracts or derivative contracts. It also includes the entire market for LELIQs, or Letras de Liquidez, Liquid Bills and Notes issued mainly in Peso currency by the BCRA (see section D below). Instead of being Peso-denominated, these contracts and their associated interest rates or yields will all become USD-denominated claims and obligations on or after Dollarization-day, or D-Day.

Treatment of individual items on BCRA's balance sheet

(In this section, each item (e.g., A.1, A.2, B etc) corresponds to a colored section of the BCRA's balance sheet in Table 2.)

A.1. Cash Currency or Banknotes and Coins.

Currently (using data for Oct 23, 2023) the BCRA has outstanding banknote issues and coin amounting to ARS 5,900 bn. In Table 1, gold and foreign exchange reserves amount to ARS 8,593 bn, divided into gold (ARS 1,372, or 16%) and foreign currency reserves (ARS 7,221 bn, or 84%). However, these values are translated at the highly unrealistic, official exchange rate of ARS 350 per USD. According to the BCRA's website, the central bank's international reserves amounted to US$ 20,977 million on November 13, 2023. If a more realistic exchange rate closer to the "blue" rate of 900 per US dollar was used, the value of Argentina's gold and foreign exchange reserves is closer to ARS 18,879 billion, over three times what is needed to redeem all outstanding peso banknotes at a market exchange rate.

The banknotes could be called in for redemption from D-Day at the chosen, fixed exchange rate. The period allowed for redemptions by the public can be generous – say with a deadline of up to twelve months from D-Day. This will reduce any sense of panic and allow people to continue to use Peso banknotes in place of coin alongside US dollar banknotes at the (now) fixed exchange rate. The redemptions of peso notes will

take place mainly at commercial bank branches; there should be an option, but no requirement, for the redemptions to occur at the BCRA. Argentineans should be told the source of the USD they will receive, namely the country's gold and foreign exchange reserves – which are ultimately the property of the citizens of Argentina anyway. Also, the underlying figures for outstanding peso banknotes and new USD banknotes estimated to be put into circulation could be published on a daily basis to avoid any panic conversions.

Supplies of US dollar banknotes could be ordered and obtained from the Federal Reserve System (normally from the Miami branch of the Federal Reserve Bank of Atlanta) by the BCRA before its dissolution, or by individual commercial banks from their US affiliates and counterparts. It would be courteous, in this context, to notify the US Treasury and the Federal Reserve System in advance of the increased demand for US dollar cash currency.

The peso coins currently in circulation need not be exchanged and could continue to circulate until reversal of the necessary provisions of the Ley de Convertibilidad which established the current Peso in January 1992. In practice, Peso coins are now worth so little due to the massive depreciation of the peso that they are seldom used. Going forward, the Argentine Treasury (not the BCRA) should mint new US$-denominated coins in the same denominations as US coinage but bearing Argentine symbols. The banks would purchase these new coins for their customers, paying US dollars, and the Argentine Treasury or Ministry of Economy would be required to hold a 100% US dollar reserve against the coins issued (like a miniature Currency Board). In this way, soundly backed new coins would enter circulation alongside US dollar bank notes, and the old peso coins would gradually disappear.

A.2.Bank Reserves. Currently, banks hold reserve deposit accounts at BCRA (amounting to ARS 1,154 bn on October 23) to meet legal reserve requirements and/or to make settlements with other banks and/or to make tax payments to the government on behalf of customers. After dollarization, these reserves would be translated into/expressed in USD at the

chosen exchange rate. There is no need for conversion in the foreign exchange market. The reserve requirements at BCRA could be eliminated and/or replaced with other balance sheet ratios enforced by a new agency for financial supervision which is not part of the central bank. (This is done in many countries, notably in Canada.)

Following dissolution of BCRA, commercial banks could operate the two clearing systems currently operated and supervised by the BCRA: (1) SML or Sistema de Pagos en Moneda Local – a Real Time Gross Settlement system that operates in Pesos and USD – and (2) CCE, or Camara Compensadora Electronica, an automated clearing house (ACH) which operates as an interbank clearing house, settling transactions on a net basis at the end of the day. Ideally, reserve balances at the BCRA will be transferred to these clearing houses.

B. BCRA as banker and provider of credit to the government.

Eliminating the ability of the BCRA to provide credit to the government is central to the task of ending Argentina's inflation. The provision of deposit accounts to the government would also be eliminated. The government accounts could be moved to one or more private, commercial banks, just as occurs in Hong Kong.

C. BCRA as foreign currency agent for the government.

This function could also be transferred to an international or supra-national agency (such as the IADB or BIS) or, after a bidding process, to a private sector bank – domestic or foreign.

D. BCRA as operator of the LELIQ market.

The elimination of BCRA as operator of the short-term LELIQ market and the conversion of LELIQ securities to US dollars is perhaps the most controversial proposal here. (Several commentators have expressed the need either for LELIQ bills to be paid out to creditors as quickly as possible and treated as secured debt second only to Base Money, or for a Special Purpose Vehicle (SPV) to be created so that the market can be continued in some form.)

To understand the true position, consider the market for EFBN in Hong Kong. This market was set up in the 1990s because the Hong Kong Monetary Authority wanted to create a local currency yield curve, but due to annual budget surpluses, there was no government debt available in Hong Kong on which to build such a yield curve. The HKMA therefore issued paperless, electronic debt instruments itself, known as Exchange Fund Bills and Notes, using the old name for the Currency Board, the Exchange Fund. Initially these short-term debt securities were auctioned on a frequent basis, with the proceeds held by the HKMA in its portfolio. Currently the amount outstanding is approximately HK$1,228 billion (or US$ 157.5 billion). Because the EFBN are liabilities of the HKMA, they can readily be discounted or sold to top up banks' clearing balances. Since it is a rule of the clearing house in Hong Kong that banks must maintain positive settlement balances (they cannot become overdrawn), the main buyers of EFBN have been banks which use the EFBN to manage their short-term liquidity positions.

In many respects the Argentine LELIQ market is analogous to the EFBN market, except that the disposition of the proceeds by the BCRA (into Non-transferable Bills of the National Treasury) is considerably more opaque, and the reliability of ultimate repayment is much more doubtful. The LELIQ market (literally, Letras de Liquidez, or Liquid Bills and Notes issued mainly in Peso currency) is a segment of the Argentine money market where the central bank of Argentina (B.C.R.A.) auctions short-term liquidity bills (LELIQs) to local banks in order to manage the amount of money in circulation and influence the interest rate. LELIQs are mostly denominated in pesos and have different maturities, ranging from 7 to 28 days. The BCRA has typically set the floor rate for LELIQs, which serves as the benchmark rate for monetary policy and lending in the economy.

Proceeds of the LELIQ auctions are invested in "Letras Intransferibles del Tesoro Nacional" (Non-transferable Bills of the National Treasury). As shown in Table 1, on October 23, 2023, the outstanding amount of LELIQs had reached ARS

23,542 billion (US$25 billion at a "blue" mid-market exchange rate of 935, or $67.3 billion at the official 350 exchange rate). The non-transferable assets corresponding to the LELIQs were the largest component of the ARS 39,432 billion of Government Debt held by BCRA. In reality, this is a scam, comparable to the scheme in Lebanon where the central bank of Lebanon issued high-yielding debt to attract funds from the banks but has never repaid any of it.

The LELIQ market was created in August 2018 as part of a new monetary policy framework that allegedly aimed to curb inflation and stabilize the peso, which had been depreciating sharply due to a loss of confidence in the government's ability to repay its debt. The BCRA adopted a zero-growth target for the monetary base (sic!) and committed to sell LELIQs at rates necessary to absorb any excess liquidity in the market. The floor rate was initially set at 60%, but it has fluctuated over time depending on the inflation outlook and the exchange rate pressures.

Irrespective of these announcements and the introduction of LELIQs – however well-intentioned – M3 growth and monetary base growth have soared (see Figure 2), and inflation has sky-rocketed (see Figure 3). These developments have naturally increased both the nominal and the real cost of credit for the private sector and the government.

For present purposes – dollarizing the Argentine economy – we need to decide how to treat the LELIQs. There seems to be no reason why the two principles set out on p. 4, should not apply. LELIQs are IOUs to be treated like any other IOU. They should therefore be subject to the same decree, converted at the chosen fixed rate to US dollar obligations from D-Day. The outstanding total amount could be transferred from the balance sheet of the BCRA to the balance sheet of the government. Insofar as the BCRA was a government entity, the debt was and is ultimately payable by the Argentine government anyway.

Going forward, maturing issues could be redeemed in US dollars (at the D-Day exchange rate), and new issues could be auctioned by a new department set up within or outside the

Treasury or Ministry of Economy. This would parallel the role of the Debt Management Office (DMO) in the UK, which is an Executive Agency of HM Treasury, established by the UK government in April 1998 with responsibility for government wholesale sterling debt issuance (popularly known as gilts), and transferred from the Bank of England. (https://www.dmo.gov.uk/)

Banks could continue to use the new USD-denominated LELIQs for managing their short-term liquidity if they chose to do so or sell them for USD cash in the market (after D-Day) or redeem them with the Argentine government (in USD after D-Day). Interest rates on LELIQs are likely to fall abruptly as D-Day approaches, and thereafter they would trade at a spread over equivalent US rates. The spread would be determined by the creditworthiness of the Argentine government, as viewed by market participants.

In the past, the LELIQ market has naturally been affected by political and economic developments in Argentina, such as IMF bailout agreements, the COVID-19 pandemic, and the presidential elections, and no doubt it would continue to be affected by such factors in future. Going forward, there might be a demand for the maturity of USD-denominated LELIQs to be extended beyond the current 28-day term of Peso-denominated LELIQs, and the new Debt Management Office would clearly need to decide whether to increase supply in this way. There would be no need, however, for any government agency to be setting any floor rate for USD-LELIQs as the BCRA did with Peso-denominated LELIQs. The auctions and the free market would set the yields for LELIQs.

Argentina would no longer have a monetary policy; it would only need to concentrate on ensuring the solvency of the government in USD terms. The supervision of banks and other financial institutions could be transferred to an independent financial sector regulatory agency (similar to Canada's OSFI, the Office of the Superintendent of Financial Institutions).

The role of the B.C.R.A. in conducting repos (repurchase agreements) and derivatives would disappear. If banks needed a tri-party repo market in future where a third entity acts as an

intermediary between the two parties to the repo, it could be provided through individual clearing banks (just as JP Morgan Chase and Bank of New York Mellon do in the US) or through a centralized clearing system or exchange operated by a central counterparty (CCP) such as operates in the US and in Europe and the UK.

E. Other liabilities.

The balance of Other Liabilities is composed mostly of either inter-government or bi-lateral agreements with foreign countries and international organizations, and there is little or no exposure to the private sector. Many of these liabilities are offset with corresponding asset entries such as SDR facilities. These could all be assumed by the Argentine government on an interim basis until a decision is made about how to participate in supra-national organizations such as the IMF and BIS.

3. Concluding Remarks

The plans set out here to dollarize the currency of Argentina broadly follow the templates used in Montenegro, which successfully adopted the Deutschemark in place of the hyperinflating Serbian-Montenegrin dinar in 1999 (and now uses the euro in place of the German mark), and in Ecuador, which dollarized the sucre in 2000 . In addition, lessons learned in setting the exchange rates of the currencies of Hong Kong in 1983 (when a currency board was re-introduced to stop the collapse of the Hong Kong dollar) and Bulgaria in 1997 (when a currency board replaced a hyperinflating domestic currency) have also been applied.

There is nothing especially complicated or unique about the Argentine case provided the two principles explained at the start of this plan are followed. Within a matter of weeks, the Argentine people could be benefitting from a stable, global currency, sharply lower interest rates and a dramatically falling inflation rate. However, the success of the plan will depend – in the long-term – on the willingness of the Argentine government to play its part and not to engage in unsustainable borrowing to finance ambitious and extravagant welfare or

infrastructure programs financed by debt. Nobody on earth can guarantee the good behaviour of the country's rulers except the citizens of Argentina. Reforming the currency should therefore be viewed as just part of a series of deep and far-reaching institutional reforms that set the country on a path to a better future.

Ideally those reforms will include strict limits on government budget deficits, the level of government debt, or any increase in taxation. The National Congress must have authority to monitor government expenditures so that a breach of any pre-set limit on the deficit or an increase in taxes or an expansion of the national debt should require super-majorities in the Congress. Whatever the mechanism, it is essential that, having ended the ability of Argentine politicians and governments to abuse the currency by excess money-creation through a central bank, they are not permitted to attempt the same kind of abusive property theft through fiscal means.

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4 Prospects for Argentina under IMF Surveillance

The prospects for the new, market-friendly administration of Mauricio Macri who became President of Argentina in December 2015 were challenging from the outset. Replacing the populist President Christina Fernandez de Kirchner, President Macri was confronted with excessive government expenditure and deficits deriving from subsidies in key sectors such as utilities and fuel, rapid growth of the public sector, inflation of 30-40% p.a., capital controls, and a dual exchange rate system. Having only a bare majority in the legislature and faced with midterm legislative elections in October 2017, the Macri government initially adopted a policy of cautious gradualism in dealing with the economic problems they inherited.

A year ago, in September 2017, my assessment was that there had been very limited improvements in the day-to-day experience of average Argentinians. In fact the purchasing power of the lower middle class, who were major supporters of Macri, had worsened due to the removal of subsidies for fuel and utilities and the resulting steep rise in their prices.

Subsequently there has been little further progress. Consumer prices have risen 44% since December 2016 and the currency has depreciated from 9.61 per US$ in November 2015 to 26.56 in June 2018. Meanwhile, partly as a result of the handover recession of 2015-16 (when the fuel and utility subsidies were ended) the real GDP has grown by only 4.3% since the first quarter of 2016, averaging 0.9% p.a. Moreover, in June 2018, following yet another episode of weakness in the currency in May (when the currency fell from 20.55 to 25.15), the government appealed to the IMF for an assistance package. However, instead of obtaining a Flexible Credit Line (FCL) or Precautionary and Liquidity Line (PLL) they were only able to obtain a Stand-By Loan Agreement (SBA) which imposes a high degree of conditionality. In short, being unwilling to bear the pain of an abrupt reform programme, and by failing to implement adequate reforms in a timely manner, Argentina has ultimately been forced to undergo an external supervision programme. But will the IMF's SBA do the job?

2. The Abuse of the Central Bank's Balance Sheet

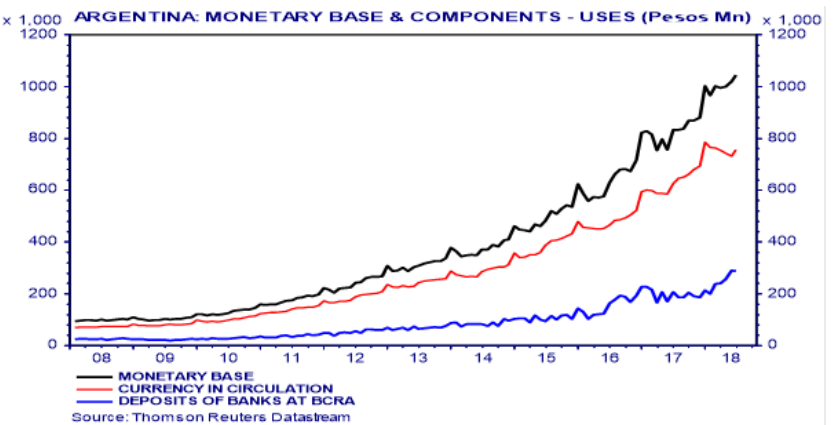

Figure 1. Argentina's Monetary Base only Tells a Fraction of the Story

A good starting point for the analysis of any economy is the balance sheet of the central bank, in this case the Banco Central de la Republica Argentina (BCRA), and its role in money

creation and government financing. As I shall explain, there are three main problems with the BCRA's balance sheet.

A normal central bank will maintain careful control over the growth of the monetary base (currency issued plus deposits of banks at the central bank) in order to ensure that the broad supply of money -- created largely by commercial bank lending -- remains broadly in line with the economic needs of the economy, i.e. growing sufficiently to finance (1) the potential real GDP growth rate, (2) the targeted inflation rate, and (3) allowing for any increase in the demand for money holdings. In an economy like Argentina such a strategy could be expected to generate a growth rate of money (M2 or M3) and the monetary base of 7-10% p.a. each.

Figure 1 shows the level of the monetary base and its components (or uses) – cash currency and reserve deposits of banks at the BCRA – since 2008. The vertical blue bar indicates the accession of Pres. Macri in December 2015. It is immediately clear that there has been no slowdown in the expansion of the monetary base under the new administration.

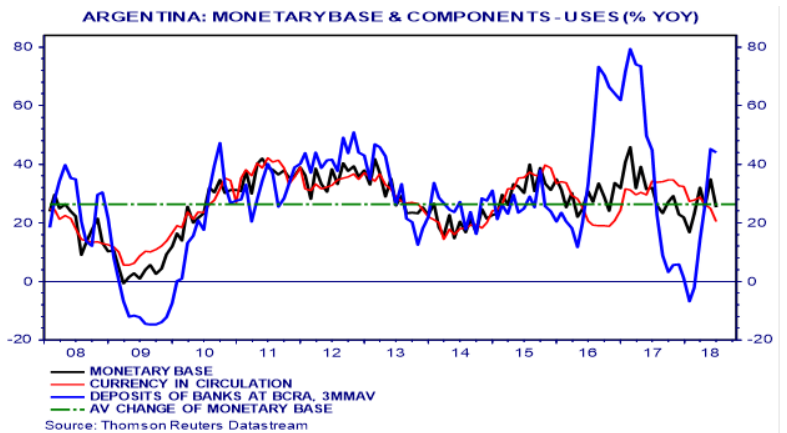

Figure 2. Monetary base growth has continued at 26% p.a. since 2008, 29% p.a. since 2016

Instead, as shown by the green dashed line in Figure 2, the growth rate of the monetary base has averaged 26% p.a. since 2008. This includes the period of global slump in the wake of the 2008-09 Global Financial Crisis (GFC) when growth of the

monetary base declined for a while to zero. As can be seen, the growth rates of its components were roughly similar between 2010 and 2016. In broad terms – and oversimplifying -- this would imply that the consolidated balance sheets of the overall banking system -- and hence the quantities of broad money and credit – were likely to have been growing at approximately the same rate. This growth rate on its own would ultimately have resulted in an inflation rate of over 20% p.a., but probably somewhat higher as velocity increased.

Unfortunately, since President Macri assumed the reins of power in December 2015 the growth rate of the monetary base has actually accelerated from 26% p.a. to 29% p.a. For the past two and a half years the components of the base have behaved very differently, with wide fluctuations in the reserve deposits of banks at the BCRA (in blue), contrasted with continued moderate changes in the rate of growth of peso currency in circulation. Even if the exchange rate had remained stable, the 29% p.a. growth rate of the monetary base would not have been a good basis for bringing down the rate of inflation.

The first problem with the BCRA's balance sheet, therefore, is that the central bank has presided over an excessively rapid growth of the monetary base over the past decade. Moreover the growth rate has accelerated since the accession of the Macri government in December 2015.

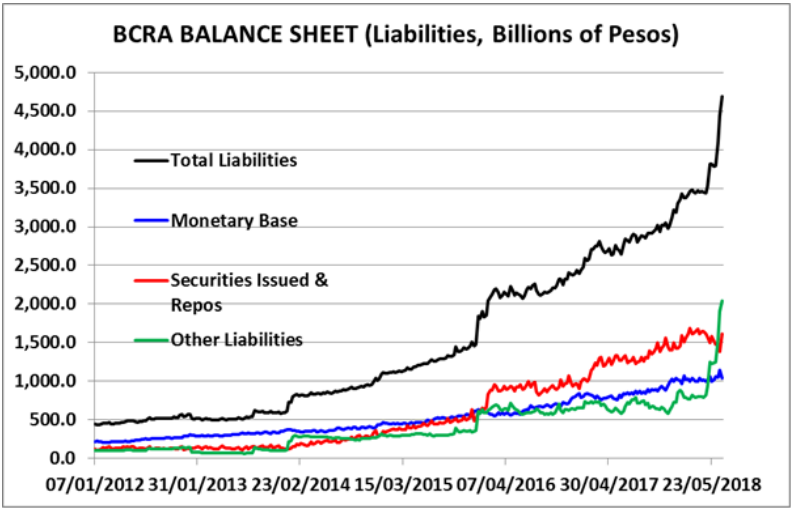

Figure 3. The Monetary Base is only 22% of BCRA's Total Balance Sheet

The second problem with the BCRA is that it has been asked to do too much and its balance sheet has massively expanded in line with the growth of these inappropriate functions. Beyond a purely monetary role it plays a large role in funding the government and acting as the government's agent in the sourcing of foreign exchange to meet the government's external obligations, which in turn has required it to sterilise the creation of pesos (that derive from this activity) on a very large scale. This now also involves the payment of very high interest rates to bank and non-bank holders of these instruments.

As shown in the chart above the total balance sheet of the BCRA at end-June was 4.69 trillion pesos (black line). The monetary base (in blue; 1.04 trillion pesos at the end of June) represents less than one quarter of the total liabilities of the BCRA. The largest single item on the liabilities side (shown in red) is debt issued by the BCRA including LEBACs, NOBACs and repos (1.8 trillion). These are the debt instruments issued by the BCRA and used to absorb the excess pesos created by the BCRA's role as a large operator in the foreign exchange market. The final item (in green) is the total of several smaller items:

foreign currency deposits of the government and other non-bank entities in Argentina (0.789 trillion – a number that has recently surged in peso terms as the currency has tumbled in value); plus other liabilities and provisions; plus obligations to foreign entities.

In short, the BCRA has been exploited by the government in its search for funds. In any reform program the BCRA's operations should be cut back to the essential monetary functions only.

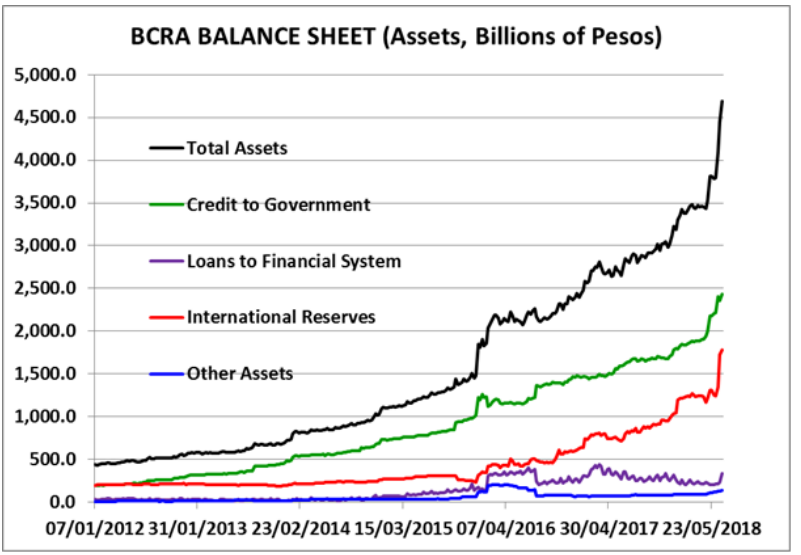

Figure 4. BCRA's Assets are Bloated with Government Debt and the Foreign Assets of Other Holders.

Turning to the asset side there are also problems. First, in green, the largest single asset is credit to the government (consisting of holdings of domestic government debt plus "temporary advances" to the government). In a fiat currency system with a floating exchange rate this is a normal situation and is not a problem so long as these holdings do not grow too rapidly. (An exception in recent years is that the central banks of the US, UK, Japan and the Euro-area have deliberately acquired large amounts of government bonds under QE programmes in an effort to expand the broad money supply

because the commercial banks were not expanding credit and hence the money supply was not growing rapidly enough.) However, in Argentina's case the acquisition of government debt was (1) a direct result of the government first misappropriating the foreign exchange reserves (under President Christina Fernandez de Kirchner) to finance domestic expenditures and replacing the reserves with domestic, peso-denominated government debt, and (2) the government subsequently leaning on the BCRA to fund its budget deficits directly at artificially low rates instead of the government borrowing funds in the financial markets.

Second, in red, the surprisingly large holdings of foreign exchange ($55 billion in reserves at end-June, plus other non-reserve holdings) resulted initially from the Kirchner-era capital controls that required exporters to channel all foreign earnings over $1 million to the central bank. Today, however, they consist of foreign reserves plus the asset counterparts of some of the government's official foreign obligations, plus the foreign currency the BCRA is holding on behalf of the government, state enterprises and other entities. The two remaining items on the asset side of the BCRA's balance sheet) are: loans to the financial system (in blue), together with contributions to international agencies such as the IMF and other assets (in purple).

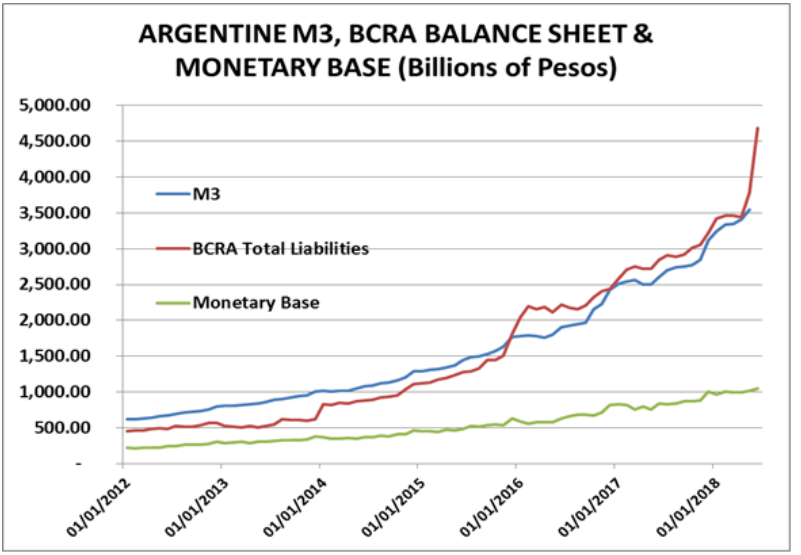

Figure 5. BCRA Assets Exceed the Size of M3 (including foreign currency).

The third problem is that the balance sheet of the BCRA has become excessively large.

In most monetary systems the size of the central bank's balance sheet is only slightly larger than the monetary base, and typically between one tenth and one quarter of the size of the broad money supply (M2 or M3) or the consolidated assets or liabilities and capital of the banking system over which it presides. For example, in Australia (where there has been no QE), the Reserve Bank's balance sheet is less than one tenth of M3.

However, as Figure 5 shows, the BCRA's balance sheet is larger than even the widest definition of money in Argentina, the entire "bi-monetary" M3 – i.e. larger than the combined peso-denominated M3 plus the dollar-denominated M3. This is a result of the prolonged abuse of the BCRA by successive governments in the period since 2002 (i.e. since the end of the Convertibility scheme).

To sum up this section, the BCRA's balance sheet has been serially abused over the past decade and a half. First, the Kirchner governments impounded the country's foreign

exchange reserves to fund its domestic expenditures; second, excessive expenditures and budget deficits were regularly financed by resort to direct borrowing from the central bank.

3. Some Symptoms and Consequences of Monetary Mismanagement

One consequence of Argentina's monetary mismanagement in recent decades is that Argentine citizens have drastically reduced the amount of money they hold in relation to nominal GDP. As Figure 6 below shows, average holdings of money (M2 or M3) in the US, the UK, China and Italy range between 65% and 90% of GDP. In the US and the UK there has been a steadily rising trend over the past two decades, while in China and Italy the rising trends have been even steeper. In Italy's case it was because after joining the ERM and later the euro in the 1999 Italians at last had a stable currency they could hold with confidence, while in China's case it has been because Chinese incomes have risen so rapidly. By contrast, Argentineans' money holdings are equivalent to only 25-27% of national income, a major drag on productivity. The BCRA should be attempting to raise this ratio by providing money that maintains its value. Paradoxically, it will do this best by shrinking its balance sheet, not by encouraging more money creation.

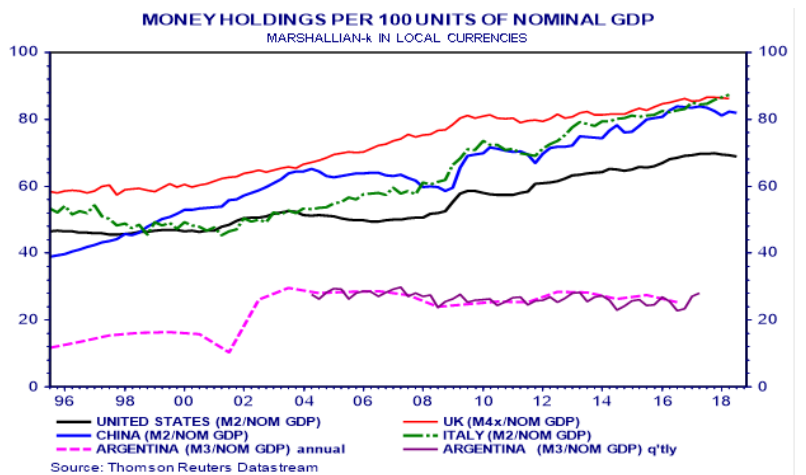

Figure 6. Argentina's History of Inflation Means that Money Balances are far Lower than Elsewhere.

The BCRA should (A) get out of the business of funding the government (other than buying bonds as a by-product of its monetary operations), and (B) also get out of the business of acting as a monopoly or even premier foreign exchange depositary. The first is supposed to be ensured under the new IMF agreement which promises greater independence for the central bank, while the second is desirable in its own right.

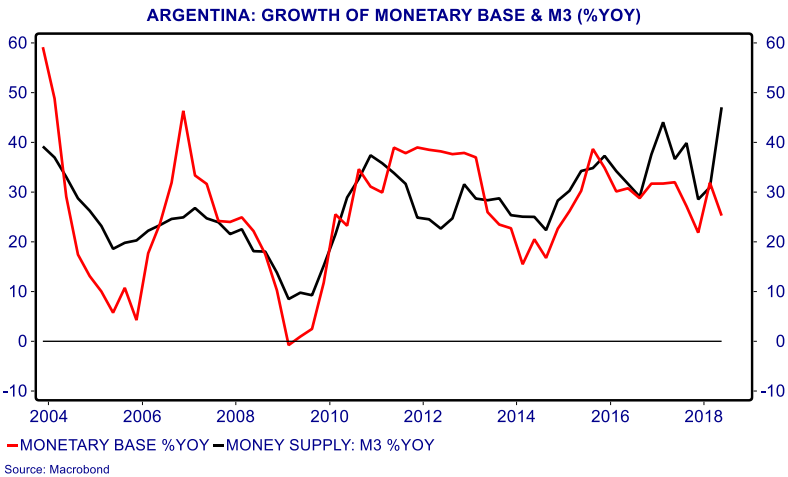

Figure 7. Monetary Base and M3 have averaged 29% and 35% since December 2015

It is clear from the analysis so far that the balance sheet of the BCRA has become detached from any normal relationship to the rest of the banking system such as those that prevail in other, more orthodox economic and financial systems. However, the role of the BCRA as a provider of funds to the government or as collector of foreign currency on behalf of the government has not changed the relation between the monetary base and the growth of broad money (M3) in the economy as a whole.

As shown in Figure 7, growth of the monetary base and growth of M3 have fluctuated together since 2004, with the base averaging close to 25% p.a.(shown by the black dashed line). This has generated an almost identical 25% p.a. average growth of the quantity of broad money (M3) in Argentina. However, since January 2016 and the accession of President Macri the growth rates of the monetary base and M3 have grown even faster, averaging 29.0% p.a. and 34.7% p.a. as shown by the solid red and black lines respectively.

The failure of the monetary authorities to engineer any significant or sustained slowdown since December 2015 means that two and a half years of President Macri's term have been used up without addressing the core source of inflation. In addition, on this basis the inflation rate will not slow down as promised or predicted in the plan agreed with the IMF.

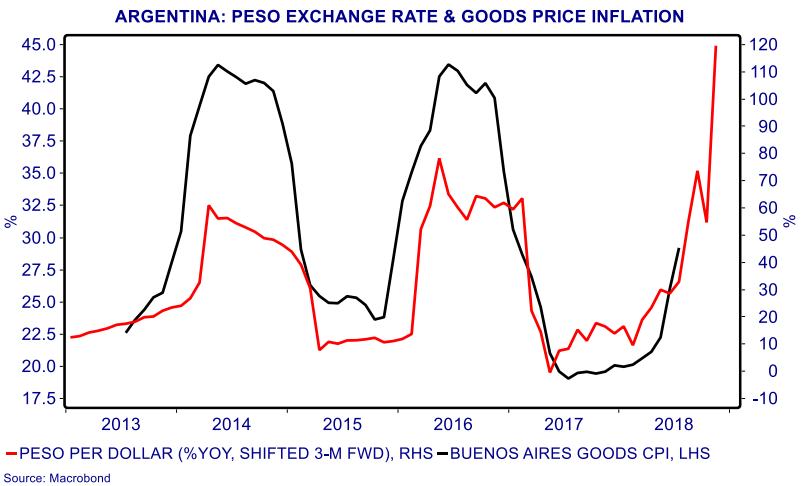

Figure 8. In the Short Term Inflation May be Driven by Currency Depreciation or Commodity Price Increases

In the short term the inflation rate can be heavily affected by large, sudden exchange rate movements or by abrupt commodity or domestic price changes, but in the longer term the dominant driver of inflation is money and credit growth. As Figure 8 shows, there have been two episodes when the inflation rate (reflected in the goods price index for the Buenos

Aires area, shown by the black line) has accelerated sharply to around 40-45% in recent years. The first, in 2014-15 was prompted by the fall in the peso from around 5.50 pesos per US$ in mid-2013 to nearly 9.60 pesos per US$ by November 2015.

The second episode, in 2016-17, followed from (1) the abolition by the newly elected President Macri of the controlled or official exchange rates maintained under his predecessor, Christina Fernandez de Kirchner, and (2) from the abolition of price subsidies and other price controls that had distorted the economy. On that occasion the peso depreciated from 9.60 to 15.90 per US$ by January 2017.

A third episode of imported inflation is currently under way due to the further depreciation of the currency from 17.70 in December 2017 to around 26-27 pesos per US$ in July 2018 . Unfortunately this will severely affect the inflation rates going forward and hence the pledges made by the government to the IMF.

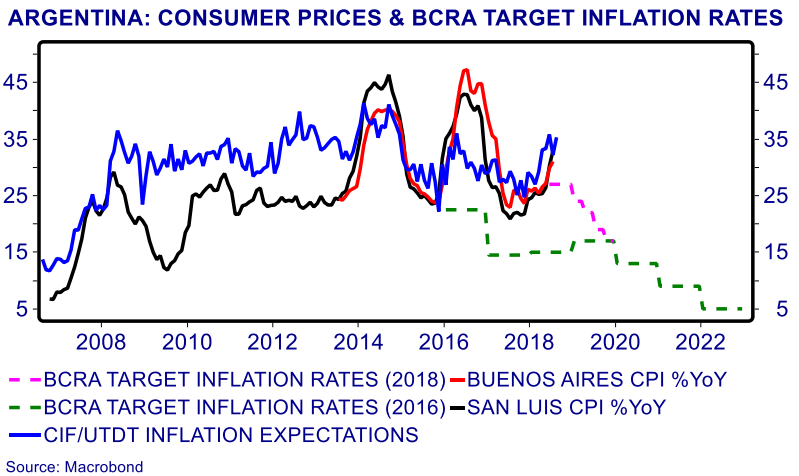

Figure 9. Argentina's Inflation Targets Submitted to the IMF Unattainable with Current Monetary Growth.

Fundamentally each of the three episodes of inflation highlighted in Figure 8 can be viewed as "once-for-all adjustments" in the price level after peso depreciation or

extended periods of supressed inflation due to price controls or fuel/utility price subsidies. No doubt the abolition of the exchange controls and the ending of subsidies is good economics in itself, but it has had and will have a severely adverse impact on the living standards of lower and middle class Argentineans which will erode Pres. Macri's support at the polls.

Already the BCRA has had to abandon its inflation targets set out (in green in Figure 9) in 2016. Looking forward, the administration made ambitious pledges to the IMF on June 12 to bring down the rate of inflation (to the revised set of figures shown in Figure 9 in pink), but – so far – it has entirely failed to slow to slow the rate of money growth (M3). This means that, combined with the pass-through of imported inflation from peso depreciation this year, the 27% inflation target provided to the IMF for 2018 and 17% for December 2019 are very unlikely to be attained unless either there is an immediate and very deep recession, or Argentineans suddenly decide to hold much higher money balances than we saw in Figure 6, effectively reducing velocity and lowering spending power. Either way, M3 growth needs to slow down drastically over the next two years from its 36% growth rate in May and decline to the 10-15% range. Only then would the BCRA stand any chance of meeting its previous targets for single digit inflation in 2021-22.

Early Stages of the 2018 Crisis

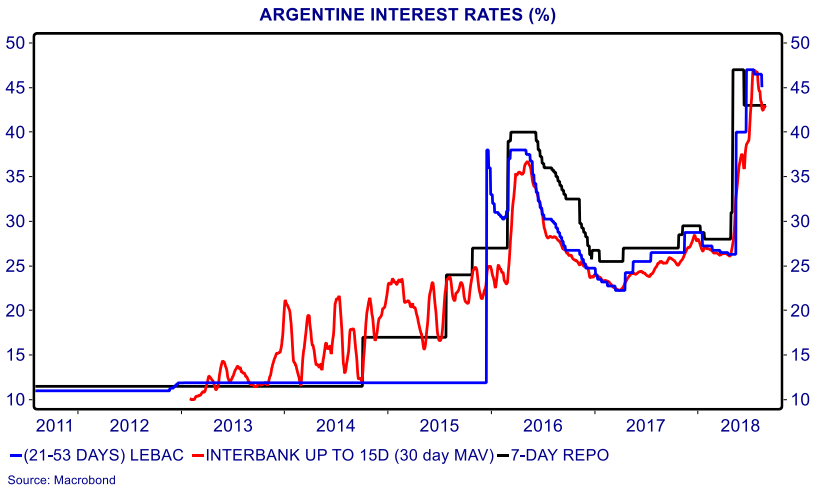

Figure 10. Interest Rates have had to be steeply hiked after the increase in inflation

Already the BCRA has had to abandon one set of inflation targets announced in 2016 during the early stages of the Macri administration. That abandonment followed the freeing up of the exchange rate and the steep rise in repo, interbank and LEBAC rates which rose abruptly to 38% between February and May 2016. Thereafter interest rates gradually declined to around 25% in early 2017, but nothing was done to ensure money and credit growth slowed. Consequently there was no progress in bringing down inflation, and the currency began to weaken again from May/June of 2017. Ahead of the election in October 2017 no further tightening was imposed.

After the October election the peso remained moderately stable at 17 per US$, but then began to fall steeply from January 2018. To prevent further currency depreciation and to minimise capital flight rates were raised again to 40% and 47% in May and June this year.

It is extremely doubtful whether even these rates will be sufficient to stabilize the economy. If the inflation targets recently committed to by the BCRA (as part of the Stand-By Agreement with the IMF) also have to be ditched, this may yet drive rates higher.

The conundrum Argentina faces is this: if the authorities maintain a free float and an open capital account, then in an already largely dollarized system, any expected weakening of the peso will prompt abrupt outflows, which in turn will exacerbate the problem of foreign debt repayment – unless the BCRA enforces extremely high interest rates. However, prolonged high rates would of course precipitate a very severe recession, something the authorities could not tolerate for long given the short (4-year) political cycle.

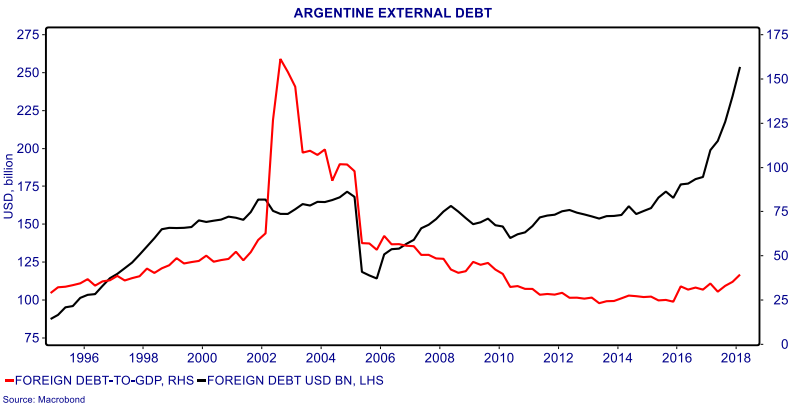

Figure 11. Under President Macri Argentina has been able to return to the global capital markets

Upon being elected in December 2015, the current government's urgent priority was to reach a deal with the last of Argentina's "holdout" bond holders that had been pursuing the country in the courts since its 2001 default. This task was achieved in late 2016 and has enabled the government to tap international markets once more. In June 2017 Argentina was even able to issue US$ 2.75bn of 100-year bonds. The century bonds were issued with a yield of 7.9% , with the proceeds going to fund the government's budget shortfall and refinance some of their existing debt.

However, with the depreciation of the peso and the resort to the IMF, foreign confidence in the new government will have been dissipated.

In 2018 Q1 external debt reached USD 253.7 bn (shown in black and on the left scale of Figure 11), 60% higher than when

Argentina defaulted on foreign creditors in 2001. In addition, there are the new borrowings drawn down from the IMF in June.

The memorandum agreement with the IMF makes numerous pledges on the reporting of economic data, on "reinforcing the BCRA's autonomy" (by December 2019), on cleaning up the BCRA's balance sheet, committing to a "flexible and market-determined exchange rate", the introduction of supply side policies, and warm words about "protecting society's most vulnerable" and "supporting gender equity". All of this is accompanied by forecasts of lower budget deficits in 2019, the reduction of central bank credit to the government and reduced inflation rates (17% by the final quarter of 2019). But there is no mention of reducing the rate of monetary growth, only a target for the net domestic assets of the BCRA.

The Argentine crisis of 2018 is yet another example of the failure of fiscal and monetary discipline in a country where this has become endemic. However, nothing will be solved on any sustainable basis unless the core problems of excessive monetary growth and funding of government expenditures and deficits by the central bank are addressed forcefully and on a permanent basis.

5. Conclusions

The BCRA's balance sheet has been abused by successive governments in the past two decades. Under the IMF Stand-By Agreement with Argentina signed in June it is proposed to strengthen the BCRA's autonomy, stop the direct financing of the government by the BCRA, while maintaining an inflation targeting regime and a free floating peso. However, the IMF program was too gradualist, and is likely to be overtaken by market developments.

The problem is that the IMF's SBA document implies the inflation targets and other reforms can be achieved by means of a gradual reduction of the fiscal deficit -- without pain and without a deep recession. Meantime the growth of the monetary base and M3 growth are still far too high. In my view the current fiscal and inflation targets in the IMF plan are

unattainable, and the plan will fail. More likely either the current plan will fail and Argentina will once again default on all foreign-denominated debt held by the private sector (the IMF will again be exempted as they were in 2002), or under a tougher version of the IMF plan Argentina will again face financial collapse and high unemployment, causing President Macri to lose the next election, and virtually ensuring a return to populism for another decade. Both the IMF and the government of President Macri owe it to the Argentine people to address the core issues and provide durable solutions, not temporary fixes that will fail at the next set of challenges.

5 Why fiscal and Phillips Curve theories of inflation are not working

Over the past two years US financial markets have been subject to two opposing market scares – most recently that inflation is about to spike upwards in an alarming way, and previous to that a common view that a recession was imminent and therefore the current business cycle expansion was approaching an end. Neither of these two scare stories has much substance, and yet they have dominated financial market sentiment and financial commentaries for months at a time.

The inflation scare, which is very much current, is based on widespread misunderstandings of the inflation process. Although measured inflation may move upwards slightly during 2018, there is no basis for predicting or expecting any significant surge of inflation any time in the next two or three years.

The recession scare was dealt a significant blow by the passage of President Trump's tax cuts in December 2017, but the legislation was not fundamental to the maintenance of the current business cycle expansion. On the basis of the NBER

definitions, the current expansion is likely to be the longest in recorded US financial history, exceeding even the ten-year expansion of the 1990s (March 1991-March 2001).

This article will explain why these two market beliefs are unsound, and why the basis for continued expansion at low rates of inflation is still largely intact.

2. Inflation since the Global Financial Crisis

In the US, Japan and the Eurozone core inflation has persistently undershot official targets of 2% p.a. in every year since 2009. Figure 1 shows semi-annual data for the targeted price index in each country on a year-on-year basis – i.e. January-June compared with the previous year and July-December compared to the previous year. The only six-month period when measured inflation exceeded 2% was when Japan's Goods and Service Tax was raised by 3% in 2014, which of course is not inflation in the fundamental sense – this was an administrative measure that led to a step increase in the price level (which is reflected in two successive increases of the year-on-year percentage changes of the semi-annual rate), not a sustained or continuing increase in prices. After the tax change, Japan's price inflation returned to its trend before the GST price increase.

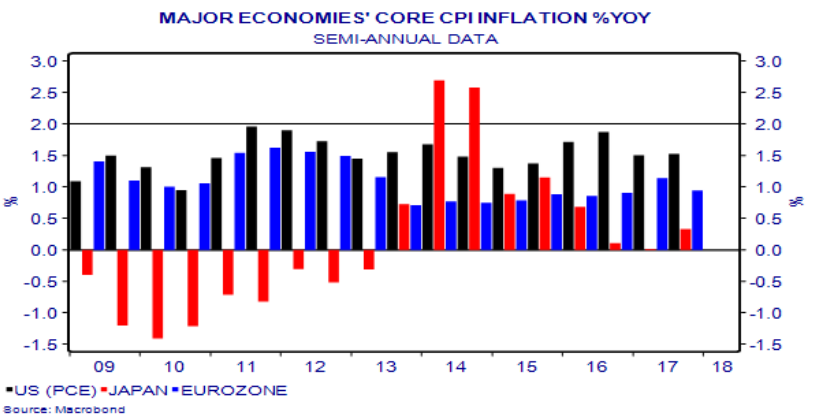

Figure 1. Prolonged Undershoot of 2% Inflation Targets in Major Economies

Yet central bankers, investment bank economists and many others have explained the low rates of inflation by referring to one-off factors. They often quote weak commodity or oil prices, or the fact that a particular currency has been strong, or other idiosyncratic events such as the "Verizon effect" in March 2017 when there was a price war among leading providers of data for US mobile phone users. Such explanations may suffice on occasion to explain temporary undershoots, but they cannot be used to explain nine years of sub-target inflation – either in the US, the Eurozone, or Japan.

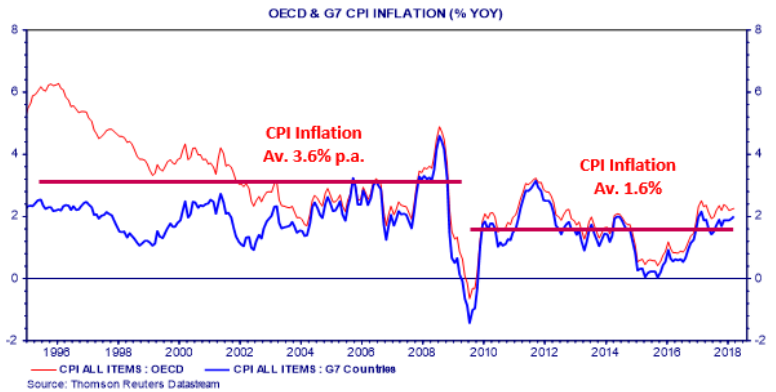

Figure 2. Inflation in the G7 and OECD Economies

The low inflation rates since 2008 are not limited to the US, the Eurozone and Japan. Figure 2 shows the GDP-weighted inflation rates – this time as measured by the overall or headline CPI in each country -- for the 35 OECD member nations as a group, and for the G7 countries.

For the OECD as a whole and for the G7 the average inflation rate has fallen well below its pre-crisis norm. From an average of 3.6% p.a. in the pre-crisis years 1995-2008 the average OECD CPI inflation rate has fallen by two percentage points to 1.6% p.a. in the period since the GFC. In the G7 the average rate has fallen from 2.1% pre-crisis to 1.3% post-crisis. In other words, the problem of inflation undershooting is more general than simply confined to the US, Eurozone and Japanese economies.

3. Two Popular Explanations for Inflation

Why has inflation fallen so broadly? What is it that has changed fundamentally in such a way as to generate this result? Before answering these questions, it is worthwhile considering two popular explanations frequently quoted by financial market participants.

(1) Fiscal Expansion

The financial markets tend to embrace one theory, often to the exclusion of others, when explaining inflation (or, indeed, other economic phenomena). In late 2017 and early 2018 there was widespread concern that a large increase in the US budget deficit as a result of President Trump's plans to cut taxes and increase infrastructure spending would cause rising inflation. This 'fiscal theory of the price level', which sees inflation as dependent on changes in government fiscal policy, attracted much attention.

Table 1. US Fiscal Deficits and Inflation, 1980-86

The Experience of Fiscal Deficits and Inflation under Ronald Reagan			
Federal Budget Balance as % GDP		Consumer Price Inflation %yoy	
1980	-1.3%	Mar-80	14.8%
1981	-2.8%	Jan-81	11.8%
1986	-5.9%	Dec-86	1.1%

However, the view that larger fiscal deficits invariably produce inflation is not supported by the evidence. One previous occasion when there was a significant cut in US taxation and rise in government spending was during President Reagan's period in office. The federal deficit rose from 1.3% of GDP in 1980 to 5.9% of GDP in 1986. However, far from increasing, the inflation rate plummeted – from 14.8% in March 1980 to just 1.1% in December 1986 (see Table 1). That result was due to the tight control of money growth implemented by the Fed under Chairman Paul Volcker. Another case is Japan in the period 1993-2015 when numerous fiscal stimulus programs failed to re-ignite either economic growth or inflation. The lesson is that without an accompanying easing of money and

credit conditions (and particularly money growth), increased fiscal deficits will not bring higher inflation.

Table 2. Fiscal Policy versus Monetary Policy

Combinations of Fiscal and Monetary Policy				
Case	Fiscal Policy	Monetary Policy	Case Histories	Outcome
A	Expansionary	Contractionary	US under President Reagan, 1981-86	Economy recovered; inflation declined
B	Contractionary	Expansionary	UK 1981 Budget under PM Thatcher	Economy recovered
C	Expansionary	Expansionary	China, 2008-10	Economy recovered, inflation increased

More generally, a fiscal deficit (or more accurately an increase in the fiscal deficit) can only be financed in three ways: by increased taxation, by increased central government borrowing, or by the printing of money to fund the new spending through the banking system.

If the increased government spending or deficit is financed by taxation but overall spending in the economy remains broadly unchanged, then there is simply a shift of spending from the private sector to the government sector. If the increased government spending or deficit is financed by borrowing, then borrowing by the private sector will be crowded out, overall spending in the economy will not change, and again there is simply a shift of spending from the private sector to the government sector. If, however, the increased government spending or deficit is financed by the printing of money (i.e. by the creation of new credit and a corresponding increase of deposits in the banking system) then overall spending can rise and – if the monetary acceleration is sustained -- inflation will follow.

Now consider the interaction of fiscal and monetary policy in Table 2. Case A cites the case of fiscal expansion against a backdrop of slower money growth – as in the US under Reagan and Volcker. In this example monetary policy dominated over fiscal policy. Case B, the case of the 1981 budget in the UK under Margaret Thatcher is similar, although the opposite policies were in force -- fiscal policy was contractionary but monetary policy expansionary. Once again monetary policy dominated.

Finally in Case C, if both fiscal policy and monetary policy are operating in the same direction, the result will be clear, but it may be hard to determine which policy was dominant. The clearest recent illustration of this is the case of China's fiscal stimulus of 2008-10.

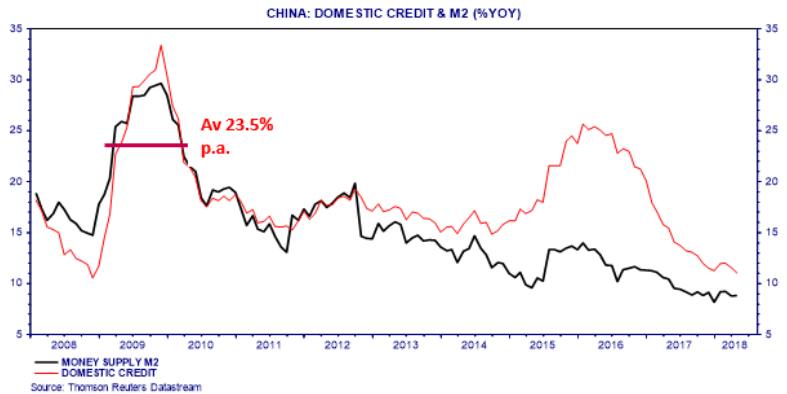

Figure 3. Money and Credit Growth in China, 2004-18

China's fiscal stimulus of 2008-10 is often cited as an example of successful fiscal stimulus, and indeed some writers have credited China's fiscal package and the subsequent recovery in 2008-10 with rescuing the global economy. But was it really the fiscal stimulus that explains the doubling of stock prices by July 2009, the surge in property prices, the commodity price bubble, China's strong economic recovery in 2009-10, and China's 6-7% consumer price inflation in 2010-11?

Briefly, RMB 4.0 trillion of fiscal spending (equivalent to US$ 586 billion at the time, equivalent to 5.6% of China's GDP) was announced in November 2008, but the central government would only provide 1.2 trillion yuan of funds. The rest was to come from provincial and local governments. In practice the provincial and local entities did not have the funds, so they turned to the banks, often creating Local Government Financing Vehicles (LGFVs) for the purpose. Banks were authorised and encouraged to support the funding needs of these provincial entities.

The result, as shown in Figure 3, was that M2 and bank credit surged from growth rates of around 15% p.a. to peaks of

30% and 34% respectively, or an average growth of 23.5% growth rates over two years. In other words, China's spectacular recovery was based at least as much on monetary expansion as on fiscal expansion. By contrast, much of the developed world was also running large fiscal deficits, but – despite QE in several economies - in no case was there an equivalent expansion of money and credit. The result, in developed economies, was anaemic recovery, and below-target inflation.

(2) The Phillips Curve

A second misguided view of the causes of inflation, popular in the financial markets and amongst academic and central bank economists, is the Phillips curve or – closely related – the output gap theory of inflation. A "typical" Phillips curve relationship, shown in Figure 4, sees wage inflation rising as the unemployment rate falls (as shown by the stylised red curve), and wage inflation feeding directly into overall price inflation. This concept is a standard feature of many economists' and central bank models of inflation.

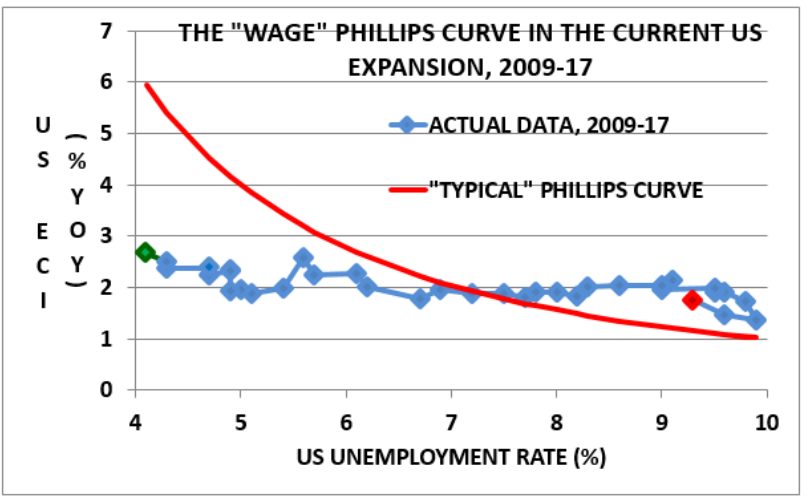

Figure 4. The US Wage Phillips Curve, 2009-17

In practice, as shown by the blue line, which plots successive co-ordinates of the US unemployment rate and wage increases as measured by the Employment Cost Index, the US "wage"

Phillips curve has been almost flat in the current economic expansion, as well as in the two previous expansions on 1991-2001 and 2002-07. The same broad flatness of the plotted wage Phillips curve relationship is found in the UK, Germany, Japan and elsewhere.

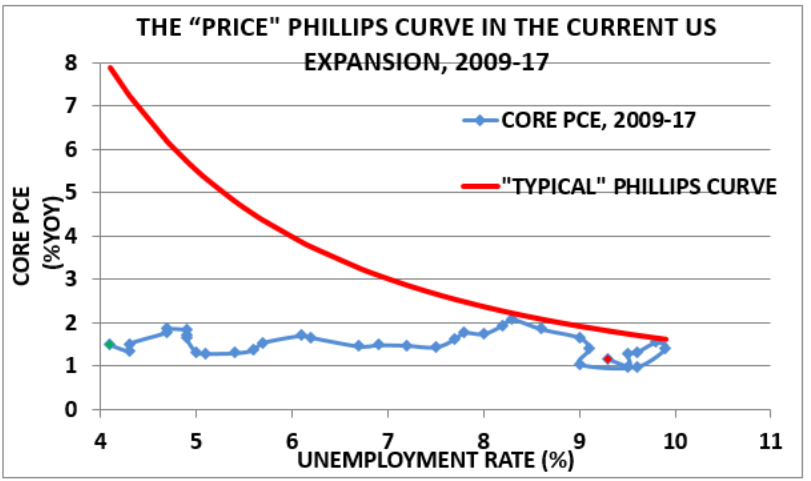

Figure 5. The US Price Phillips Curve, 2009-17

Figure 5 shows the "price" version of the Phillips curve – i.e. instead of wage increases on the vertical axis it shows inflation on the vertical axis. In this case we have chosen to show the quarterly data for year-on-year increases of the PCE deflator which is the preferred measure of inflation for the Fed and its FOMC members.

When asked why the Phillips curve is not working, most economists will say that although it does not appear to be working now, at some stage there will be a trigger point at a lower level of unemployment that will cause wages and inflation to increase much more quickly. In other words, they imply that the shape of the Phillips curve is more like a rectangular parabola, kinking sharply upwards at some undefined, lower level of unemployment. However, in my view this is not credible.

The problem with this approach to inflation is that while the Phillips curve is an empirical relationship that sometimes

holds, it is not a complete theory of the inflationary process. Therefore although the Phillips curve relationship can be observed in numerous past episodes when a tightening of the labour market was followed by wage increases which in turn were accompanied by or followed by rising consumer prices, this need not always be the case. Moreover, there is no theoretical reason why this should always be the case. In other words, it may be feasible for the economy to experience rates of unemployment below the supposed "natural rate", and yet for inflation to remain low.

The same problems apply to the output gap theory of inflation. In the past there have been numerous episodes when inflation has increased following the supposed closing of the output gap. But again this is an empirical observation, not a complete theory of inflation. Leaving aside the problem of measuring the output gap and the potential level of real GDP, there is no theoretical basis for asserting that closing the output gap will inevitably lead to inflation. The truth is that these explanations of wage increases or price increases deriving from tighter labour market conditions are what economists call "reduced form" relationships – i.e. simplified versions of reality, but not the whole story.

Figure 6. The Mechanism Underlying the Business Cycle

More fundamentally, the key point is that inflation is a monetary phenomenon, and therefore it will only rise after a sustained period of faster money and credit growth. Moreover, inflation should be seen as a part of the business cycle which itself is a monetary phenomenon.

A stylised, flow-chart version of the relation between (broad) money growth, asset prices, economic activity and CPI inflation is shown in Figure 6. It will immediately be apparent that the Phillips curve and the output gap explanations of

inflation only focus on the two right hand boxes in the diagram. The Phillips curve says, in effect, because the labour market (in the Economic activity box) has tightened, goods and service price inflation (in the final box) will follow.

In a case where a tight labour market has been preceded by a sustained period of more rapid money growth, such a forecast will probably turn out to be correct. However, in a case where there has been no such acceleration of money growth it does not follow that there need be any significant increase in the inflation rate. As we shall see below, in most developed economies since 2009 there has been no sustained acceleration of money growth sufficient to cause a surge in inflation. Until there has been, it follows that inflation will remain low.

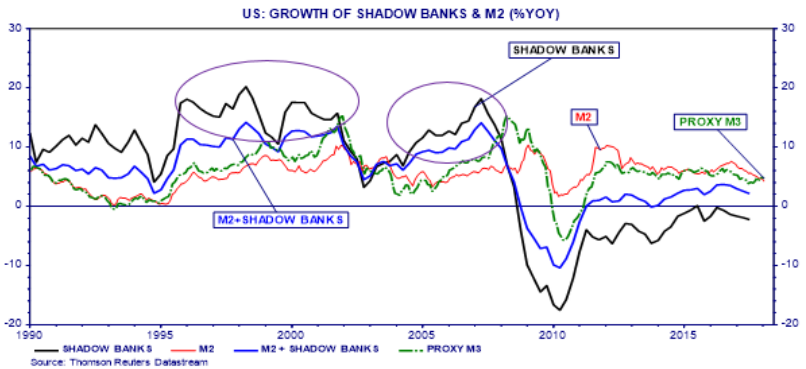

Figure 7. Money and Shadow Banking Growth in the US, 1990-2017

Taking the US first, Figure 7 shows year-on-year rates of change for the key monetary aggregates of the United States – M2 and M3, and data for the shadow banking system. The money growth rates since around 2012 have been low and broadly stable with M2 and M3 averaging 6.6% and 5.2% year-on-year respectively. Historically such growth rates have never led to a significant rise in inflation, so there is no reason to expect any upsurge over the next two years.

Notice that M0 (or the monetary base or the Fed's balance sheet) is not included in the chart because inflation is related to rates of growth of broad money held by the non-bank public

(i.e. mostly firms and households), not the size of the central bank's balance sheet.

Notice also that the circled periods, namely the tech bubble of the 1990s and the housing bubble of the early 2000s, were both accompanied by double-digit growth of credit in the shadow banking system and accelerating growth of M3. Since the GFC, shadow banks have essentially been in hibernation, with shrinking balance sheets. Consequently the total for M2+Shadow banks has only been growing at about 2% p.a.

Since the start of 2017 M2 and our proxy for M3 (which is in many ways preferable to M2) have slowed to 3.7% and 4.2% year-on-year respectively in April 2018 – enough to support the growth of the economy and an inflation rate of around 2%, but not much more.

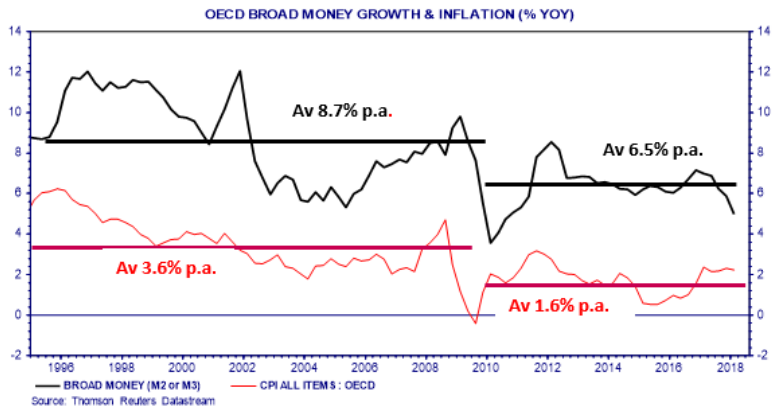
OECD BROAD MONEY GROWTH & INFLATION (% YOY)
Av 8.7% p.a.
Av 6.5% p.a.
Av 3.6% p.a.
Av 1.6% p.a.
BROAD MONEY (M2 or M3)
CPI ALL ITEMS : OECD
Source: Thomson Reuters Datastream

Figure 8. Money Growth and Inflation in the OECD, 1995-2018

Low and stable money growth is not confined to the US. The Eurozone, the UK and other developed economies have all experienced significantly slower growth rates of broad money and credit than in the period before the GFC. Consider the weighted growth of broad money (M2 or M3) in the 35 economies of the OECD in Figure 8, where the data are shown on a quarterly, year-on-year percentage change basis. Between 1995 and 2008 average money growth was 8.7% p.a., which generated an average CPI inflation rate of 3.6% p.a. over the same period. Since the GFC, in the period 2009 to 2017 average

broad money growth has been 6.5% p.a. which has generated a CPI inflation rate of 1.6% p.a. across the OECD as a whole (to 2018 Q1).

In effect the OECD average broad money growth rate has slowed by 2.2 percentage points since the GFC while the CPI inflation rate has slowed by 2.0 percentage points. Given the way in which these data were collected from such a wide variety of sources, it cannot be mere coincidence that these reduced rates of money growth and inflation are so close numerically. In 2018 Q1 (the latest data available) OECD money growth slowed to 5.0% while CPI inflation stood at 2.2%.

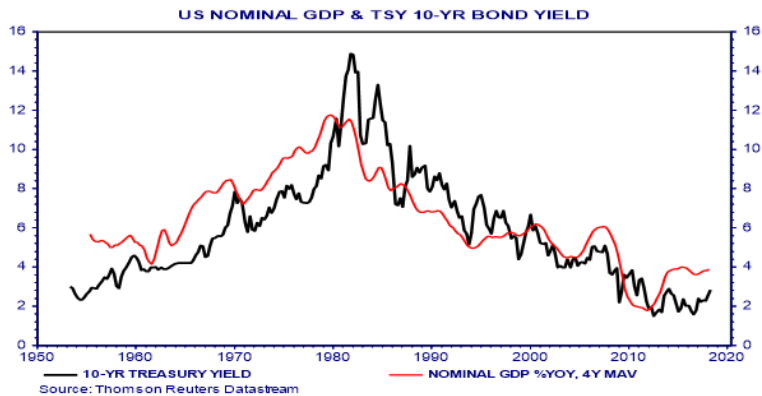

Figure 9. US Nominal GDP and 10-year Treasury Bond Yields, 1953-2018

For the US, the low growth of money and credit in recent years implies that inflation, a primary driver of long bond yields, will remain subdued. However, as mentioned at the start, there have been significant inflation scares – mostly deriving from President Trump's tax cuts combined with his proposed increased infrastructure spending and the prospect of a larger budget deficit.

These background developments in fiscal policy fell on fertile ground – a climate of ideas dominated by the fiscal theory of the price level, together with a widespread reliance on economic models that rely heavily on the "Phillips curve" or an "output gap" framework. All this means that inflation

expectations have become much more sensitive to current developments. For example, the modest increase in US average hourly earnings to 2.9% year-on-year (compared with consensus expectations of 2.6%), announced on Friday, February 2, 2018 produced an abrupt rise in 10-year Treasury bond yields to over 2.8% for the first time in four years. (Figure 9 shows bond yields for April at 2.83%.)

Thus despite near full employment, despite low unemployment, despite the fiscal deficit, and despite the weak dollar in 2017 it is likely that as long as money and credit growth remain low (as in the past few years), actual inflation will not match expected inflation.

4. Popular Explanations for the End of the Business Cycle Expansion

The second scare story mentioned at the start of this article was an imminent recession. In my view this idea, which admittedly has been less prevalent since the Trump tax cuts of 2017 but was nevertheless widely explored in numerous models of "recession probability" in 2016 and 2017, is largely groundless. A recession is probably at least two years ahead, possibly more. Before explaining the rationale for a continued business cycle expansion we examine some popular views about why the cyclical upswing may be about to end.

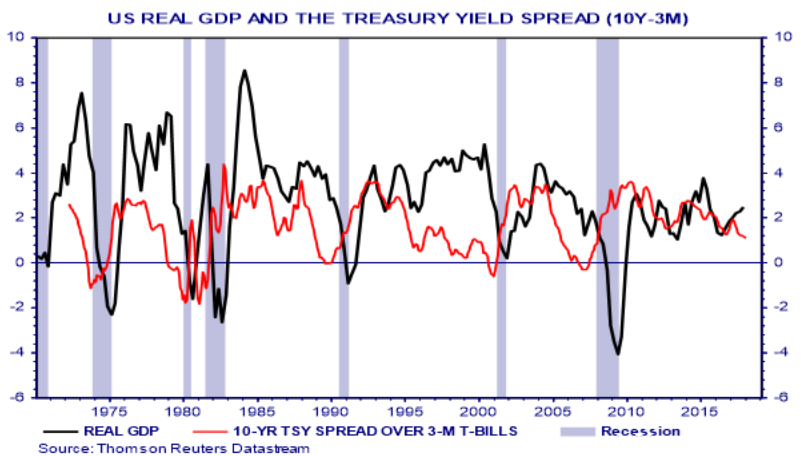

Figure 10. US Real GDP Growth and the Treasury Yield Spread

First, the best indicator by far of an imminent recession in the US has been the inversion of the yield curve shown by the spread between the 10-year Treasury yield and the 3-month Treasury bill yield in Figure 10. However, the yield spread is composed of the difference between two rates: a long term rate determined in the market, and a short term rate largely determined by the Fed. The cause of an inversion is almost always a steep rise at the short end of the curve – i.e. by deliberate Fed tightening (for example, to deal with inflation). Consequently the yield curve is a symptom of underlying tightening of policy; the real cause of the inversion is the tightening of policy (usually reflected in slower growth of money and credit aggregates).

In most historical cases an inverted yield curve implies that short term rates have been raised, tightening monetary policy and slowing money growth. Thus ahead of every NBER-designated recession since 1973 the yield spread has turned negative, although in 1989 the inversion was only marginal. The growth rate of real GDP is shown in Figure 10 on a year-on-year basis in order to reduce its volatility, although it should be noted that the NBER does not measure recessions based solely on changes in the real GDP.

In any case the yield curve is far from inverted currently. The latest data in the chart (for April 2018) show a yield spread of 1.03%. Assuming no decline at the long end of the curve, short rates would need to rise abruptly by 1.03% or more in order for the yield curve to invert.

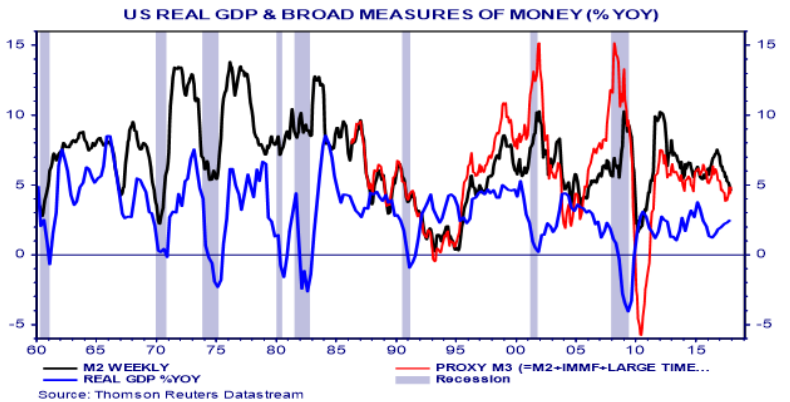

Figure 11. US Money Growth and Real GDP Growth

The second indicator that could spell a recession ahead is a slowdown in money growth. The chart shows the NBER-designated recession bands, this time since 1960. Ahead of every recession from 1960 to 1980 there was a slowdown in M2 growth. In 1981-82 the recession came about largely as a result of the high inflation rate interacting with limited money (so real money growth declined), but deregulation of interest rates and other similar measures meant that M2 growth did not show the same sort of slowdown as in earlier episodes. The recessions of 1990-91 and 2001 were each preceded by monetary slowdowns, and for these episodes there is data for M3 which showed a very similar profile to M2 in each case. The interesting case is the recession of December 2007 to June 2009 when there appeared to be no slowdown of M2 or M3 – on the contrary they both accelerated. For a proper understanding it is necessary to consider the rapid growth of credit -- or financial liabilities -- in the shadow banking system (Figure 7). This peaked in 2007 Q2, and then slowed sharply in the period up to the Lehman Brothers bankruptcy in September 2008, when it plunged into negative territory. The bankruptcy precipitated a sudden freeze in the credit markets, and a dramatic shift of funds back into the banking system. So the surge in M2 and M3 in 2007-09 was a result of the run on the shadow banking system, not a sign of ample liquidity in the financial system as a whole.

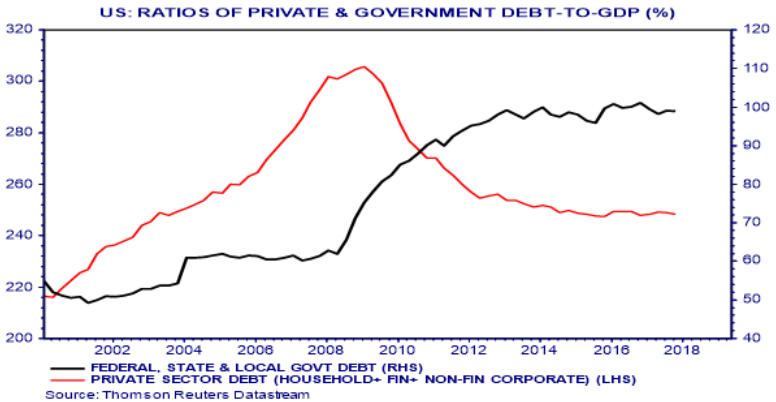

Figure 12. Private sector deleveraging has improved resilience of US to possible recession

A third indicator that is important in the aftermath of the 2007-09 balance sheet recession is the health of private sector balance sheets. The chart above shows the ratios of private and public sector debt to GDP for the US since 2000.

US private sector debt – which includes the debt of the household sector, non-financial business sector and financial sector -- peaked at 305% of GDP in 2009 Q1. Since then the private sector leverage ratio has declined to 248% as of 2017 Q4, a cumulative decline of 57 percentage points. This means that the private sector leverage ratio has returned to the level of 2003, unwinding two thirds of the leverage built up since 2000. Most of the deleveraging has been achieved by balance sheet repair in the financial sector (banks and shadow banks), with the household sector contributing to a smaller degree. The US public sector debt ratio -- which includes federal, state and local government debt -- began rising in 2008 soon after the start of the US recession in 2007 Q4. So far the all-government debt ratio has risen from 62.6% of GDP in 2008 Q2 to 99% in 2017 Q4.

We cannot know in advance how much the US private sector will de-lever, and relative to GDP there may be further deleveraging ahead. However, the key point is, as regularly reported by the New York Fed, consumer balance sheets are in

much better shape, so that even if rates continue to rise, US consumer spending should remain resilient.

5. Conclusion

The two main threats to financial markets – inflation and recession – have been exaggerated. Financial market participants and others have relied on unsound theories of inflation: the fiscal theory of inflation, and the Phillips curve or output gap.

Fundamentally, however, inflation is a monetary phenomenon and requires sustained faster growth of money and credit to support any significant increase in goods and service prices. Yet in the US and across the OECD money and credit growth remain subdued since the GFC. Money growth is not so rapid as to cause inflation, nor has it slowed sufficiently to precipitate a recession. It follows that the current US business cycle expansion is based on firm foundations, and should be able to continue for several more years, with low inflation. Similarly, the yield curve, money growth and the health of private sector balance sheets imply there is currently no basis for predicting an imminent recession.

Conclusions

The Lessons Learned: The Inevitability of Fiscal Dominance: A detailed analysis of these four case studies clearly highlights the core challenges facing modern macroeconomic management. Ranging from Japan's QE dilemma and the exchange rate crises of China and 1920s Japan, to Argentina's chronic central bank abuse, these studies point to a common pathology: the limitations of monetary policy's ability to cure deeply embedded fiscal and institutional diseases.

The findings of the four papers lead to three essential, overlapping conclusions:

1. Successful Monetary Policy Depends on the Structural Transmission Mechanism

The first paper (on QE) demonstrates that how a monetary policy tool is implemented is more vital than its sheer magnitude. The QE programs of the Fed and the BoE successfully utilized the credit channel by reducing non-bank leverage and expanding deposits. Conversely, the QE efforts of the BoJ and the ECB failed to achieve success in these key

transmission mechanisms. This is a critical lesson for policymakers: The effectiveness of monetary policy is determined by the structural characteristics of the financial system and the level of indebtedness. Simply inflating the central bank's balance sheet will fail to normalize inflation and growth if the money cannot healthily penetrate credit markets or resolve leverage issues. Monetary expansion can only reach its full potential when coupled with financial de-leveraging.

2. The Obsession with Currency Value is Historically Destructive

The second paper (China/Japan) establishes a historical parallel, illuminating the long-term cost of turning exchange rate policy into a matter of political pride. Japan's 1920s fetish for returning to the pre-war exchange rate level led to a decade of economic crisis. Similarly, China's rigid exchange rate regime, despite maintaining external surpluses, risked creating structural domestic problems. This proves that external imbalances eventually translate into internal instability (deflation, slow growth). Flexibility in exchange rate policy is a prerequisite for long-term economic health; otherwise, the cost of radical corrections like devaluation or exchange rate reunification will eventually have to be paid.

3. The Institutional Wreckage of Fiscal Dominance Necessitates Radicalism

The third and fourth papers, focusing on Argentina, most acutely support the book's main thesis: Fiscal dominance does not merely affect an economy's monetary policy; it destroys it entirely. The root cause of inflation and currency weakness in Argentina is the abuse by successive governments of the Central Bank (BCRA) balance sheet to finance budget deficits.

The Dollarization proposal in the third paper represents the very definition of institutional self-immolation against this crisis of institutional integrity. It is a last-resort solution that goes beyond conventional policy adjustments, requiring the complete abolition of monetary authority and the delegation of currency management to a credible external institution. Dollarization, as in the Argentine case, becomes inevitable when confidence in the political institutions' ability to enforce fiscal discipline has dropped to zero.

The fourth paper highlights the failure of gradualism. While the IMF's Stand-By Agreement (SBA) proposed a gradual reduction of the fiscal deficit and strengthening central bank autonomy, the plan was predicted to fail given the existing high monetary growth and inflation targets. This outcome reinforces the argument that chronic fiscal abuse cannot be solved with slow and painless reforms, but instead requires a radical, painful, and immediate institutional intervention. Every delayed or insufficiently severe policy correction will plunge the country back into a spiral of default, financial collapse, or a return to populism.

Final Implications and Policy Direction

These four studies present a clear manifesto for global policymakers. Success depends not only on focusing on the technical toolkit (QE, interest rates) but also on a deep understanding of the institutional and fiscal environment in which these tools operate.

1. Fiscal Discipline is Paramount: Central bank autonomy is only meaningful when the government's ability to finance its deficits, whether directly or indirectly, is eliminated. Ending fiscal dominance is the precondition for monetary stability.

2. Structural Reform Over Gradualism: Deep-seated institutional credibility issues (Argentina) or structural imbalances (credit transmission problems in Japan) cannot be solved with gradual approaches. The solution must focus on institutional design (e.g., an independent debt management office similar to the British DMO) and decisive, large-scale policy shifts (Dollarization, immediate exchange rate correction).

3. Design Matters: When designing QE or other unconventional tools, the objective must not solely be to provide liquidity but also to correct private sector indebtedness and the balance of risk (leverage).

This book challenges conventional wisdom, arguing that bold and structural steps are unavoidable for restoring global macroeconomic stability. Monetary policy can only be effective under the shield of fiscal discipline; once that shield falls, the only choice is radical institutional restructuring or inevitable collapse. These four cases serve as a painful reminder to

policymakers: Economic stability is the product of political will and institutional integrity.

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The Limits of Conventional Policy: Fiscal Dominance, Central Bank Integrity, and the Cost of Macroeconomic Failure

Author: ***John Greenwood***
Edinburgh University, UK.

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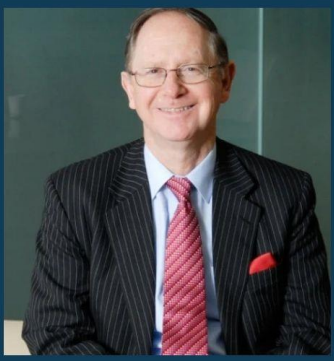

John Greenwood

Chief Economist at INVESCO plc, John Greenwood OBE, is a graduate of Edinburgh University. He did economic research at Tokyo University and was a visiting research fellow at the Bank of Japan (1970-74). From 1974 he was Chief Economist with GT Management plc, based initially in Hong Kong and later in San Francisco. As editor of Asian Monetary Monitor he proposed a currency board scheme for stabilizing the Hong Kong dollar in 1983 that is still in operation today. John was a director of the Hong Kong Futures Exchange Clearing Corporation (1987-91) and council member the Stock Exchange of Hong Kong (1992-93). An economic adviser to the Hong Kong Government (1992-93), he has been a member of the Committee on Currency Board Operations of the Hong Kong Monetary Authority since 1998. He is also a member of the Shadow Monetary Policy Committee in England. John is a director of INVESCO Asia Ltd in Hong Kong, INVESCO Asset Management Singapore Ltd, and the Hong Kong Association in London. In 1980 he translated Yoshio Suzuki's book, "Money and Banking in Contemporary Japan" from Japanese. In 2007 he completed a book entitled Hong Kong's Link to the US Dollar: Origins and Evolution which covers the collapse of the currency in 1983 and its subsequent restoration to stability under the plan he devised.

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